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THE CAVALRY JOURNAL

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A squad of the 1st Cavalry Division Provisional Reconnaissance Unit enters the division rear echelon on Leyte, Philippine Islands.

JANUARY-FEBRUARY, 1945

What the Service Journals say of

MODERN RECONNAISSANCE

"This should be a valuable volume for every officer or enlisted man who goes out on reconnaissance or acts on information acquired by reconnaissance—which includes every person within sound of the enemy guns."

—Coast Artillery Journal.

"The book is not in any way limited in interest to cavalry or reconnaissance units. It is of definite interest to all ground and air combat officers and men, and to members of all combat staffs."

—Infantry Journal.

". . . a valuable book for study or reference, containing a wealth of diversified military experience."

—Marine Corps Gazette.

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The United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and solidarity of the Cavalry of the Army of the United States.—Article III, Constitution.

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The Cavalry Journal

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COLONEL EDWIN M. SUMNER, *Cavalry, Editor*
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Armor and Its Place in

*by Major John North**

THE most famous of all the divisional signs in the British Army is that of the Desert Rat. Three times in this war that division has fought its way backward and forward across the sands of Libya. The fourth time it continued into the mountains of Tunisia, onward through Sicily into the mountains of Italy, thence to Normandy, and thereafter through France and Belgium.

What are the highlights of this formidable sum of practical and highly varied experience in the field? What lessons do they point for the future of tank warfare and of tank design?

It is always dangerous to draw a general conclusion applicable to any and every theater of war, but there is one such conclusion which all exponents of armored warfare must be prepared to accept in the light of general experience. The brightest expectations of the prewar exponents of armored warfare can now hope to be fulfilled only at certain rare moments.

If the unique and essential characteristic of the tank is its power to combine fire with movement, the African desert was the perfect battlefield for tank warfare. It provided unlimited room for maneuver, and natural tank obstacles were virtually non-existent. Only the problem of supply acted as a brake on mobility.

*British Staff Officer.

This scene in the village of Cagny, France, shows tanks knocked out while supporting the infantry during heavy street fighting. The Sherman tank at right has a broken track which is being repaired by a Royal Engineer crew.

The Antitank Gun

Nevertheless it was in the African desert that the tank met its master in the antitank gun, which might or might not be mounted in another tank. Before the emergence of the antitank gun as the only satisfactory answer to the tank, a succession of tank v. tank battles had been fought from the borders of Egypt to the fringe of Tripolitania—battles that evoked obvious comparisons with naval warfare and were fully deserving of the description of tank battles. The arrival of the modern antitank gun virtually killed the tank as an independent weapon in the spearhead of the attack. Indeed, tank tactics were reduced to the negative form of luring one's opponent on to one's own antitank guns.

Ironically enough, it was that energetic exponent of tank warfare, the late Field Marshal Rommel, who became the victim of these tactics, which, in earlier battles, he had employed successfully against outgunned and out-armored British tanks whose only chance of hitting the enemy had been a quick "dash-out." On August 30, 1942, in a special order of the day, Rommel announced: "The Army is moving into the attack for the final annihilation of the enemy." But it was his own armor that was annihilated—by salvoes from British antitank guns and British tanks, lying in hull-down positions on ground of their own choosing.

The Mine Field

The second answer to the tank proved to be the minefield. It was on its two-thousand mile "march" from Alamein to Tunis that the British Eighth Army had first-hand experience of the dominating contribution of the mine field in the enemy conduct of a long-fought delaying action. The mine, however, is effective less for its destructiveness than for the limitations it imposes on that freedom of maneuver which is vital to the function of the tank as an aggressive weapon. The last humiliation of the tank is to find itself converted into a stationary pillbox.

As already pointed out, the brightest expectations of the prewar exponents of armored warfare can hope to be fulfilled now only at certain rare moments; that is to say, at those times when an armored force is not

ne Future

This armored vehicle of the Royal Engineers; known as the A.V.R.E., is similar in design to the famed Churchill tank. Its striking external feature is a special mortar mounted in the turret. This mortar, known colloquially as the "Petard," can hurl a charge containing many times the weight of explosive of other projectiles of similar dimension.

Exploit in Tunisia

crippled in its power of movement by the mine and the well-sited antitank gun. One such moment occurred in the Tunisian campaign. In the final battle of that campaign, in the second week of May 1943, as soon as the infantry had cleared a gap in the enemy defenses, three armored divisions were flung into the battle, not to fight enemy tanks, not to kill enemy troops, but to cripple the enemy organization by ripping asunder the whole fabric of his fighting machine. During that battle every available tank was directed on Tunis and beyond; and within the space of a few days a hitherto redoubtable German army had ceased to exist. It will be observed that, as in all the later desert battles, tanks could not become the spearhead of the attack until the infantry and supporting tanks had opened a path for them.

Thus, in face of the development of antitank defensive measures, it must be accepted that the main rôle of armor in Africa had taken the form of exploiting infantry success. Its other rôle—that of infantry support—was to take first place in Normandy and in Holland.

Normandy

Indeed, in the Normandy battles, tanks were used in a rôle which hardly can be said to come within the category of tank warfare. At one time it was axiomatic that tanks could not be expected to engage in street fighting. Nevertheless, in order to assist the infantry attack and to sustain infantry morale, they were called upon to "brass" windows where snipers might be lurking and "spray" village streets with high explosives. Contrary to African desert experience, they had to be used in "penny pockets" in the closely wooded Bocage country, where their view of a winding lane was confined to what could be seen over the adjoining hedges. There the tanks, far from being the spearhead of the attack, required its own infantry support—a fashion thoroughly developed by the Germans, who allotted a section of Panzer grenadiers to accompany each tank on foot and to clear the way for it. The infantry, indeed, may be said to have led their tanks into battle like monster pets, and were "almost constrained to pat them on the nose by way of encouragement!"

Under such conditions of terrain, objectives which used to extend up to 3,000 yards, had to be cut down to 1,000. The only guarantee of success was close personal coöperation between the infantry and tank commanders, based on careful preparation before the battle. If the armor joined up only on the start line, real coöperation was out of the question.

Once the infantry objective was reached, the tank commander was often called upon to stay on it in support of the infantry even at the cost of the almost certain loss of his tank, since it was often impossible to take up a position which was hull-down from all angles. Finally, it should be noted that the majority of the tanks engaged in this style of warfare were of the cruiser type, whose speed and maneuverability could not hope to offset their lack of heavy armor.

Holland

In Holland these same cruiser tanks were called upon to operate under conditions which, although entirely different, were not less difficult. There the raised road embankment silhouetted the tank against the skyline. The road itself was often mined and its canal and river bridges certainly blown. The penalty of getting off the road almost as certainly was to get bogged.

Again the prime function of the tank arm was to sustain infantry morale under appalling conditions of fire and mud and water, and to engage, when possible,

concealed enemy weapons. More often than not these were sited almost at ground level and almost impossible to detect until they had got in the first shot.

These "grey periods" in the story of tanks in this war are illuminated by two of those "rare moments" which justify the faith of those who, in prewar days, preached the gospel of mechanization. The wide encircling drive of the American Third Army is unlikely ever to be excelled as a classic episode in the history of tank warfare. Likewise the drive of the British armored divisions from the Seine to Amiens, Brussels and Antwerp provides an example of what tanks can achieve in the way of dislocating an entire enemy front when that enemy is given neither time nor opportunity to resort to his two prime defensive measures against tank penetration—the minefield and a screen of antitank artillery.

Tank Design

It will be agreed from these observations that more than one type of tank is required under the varying conditions of modern warfare. It will also be agreed that a multiplicity of types is a complication in manufacture and maintenance which should be avoided. It must also be obvious that a dual-purpose tank—that is, a tank suitable for working with infantry and also for operating in an armored division—will permit of its ubiquitous employment. This is a major consideration in the eyes of a commander-in-chief, since he will be allowed greater flexibility in the planning of a battle and will not be compelled to keep a large percentage of his armor unemployed. It is significant that the heavy infantry tanks which did excellent work in the difficult fighting in Normandy could take no part in the pursuit because of their relatively slow speed.

Since there can be no question that a light tank is necessary for reconnaissance and pursuit, and since it is generally agreed that a really good dual-purpose gun (both armor-piercing and high explosive) is essential, the whole question of the future of tank design resolves itself into the simple query, "Must there be two types of the fighting tank—an infantry and a cruiser tank?"

The question arises as to whether or not the contribution of the heavy infantry tank in the Normandy fighting was conspicuously superior to that of the cruiser type. If it was not, its continued existence can hardly be justified, since its usefulness must be confined to the close-quarter fighting that precedes the pursuit.

Weight, armor, and speed must always be matters for compromise, and the compromise here to be effected is the increase in weight of armor on the cruiser type. It may be a compromise which is not likely to have serious repercussions if it should be accepted—as it must be in the light of experience—for a super-heavy slow-moving tank, however effective it may be on occasion, is too unwieldy to be an economic proposition in the long run. It is probably safe to suggest that no tank should exceed 45 tons. On this basis of reckoning the logical procedure for tank designers of the future would be to select the best possible dual-purpose gun, to produce an engine with sufficient horse power to obtain the required speed, and then to fit armor to the agreed maximum weight.

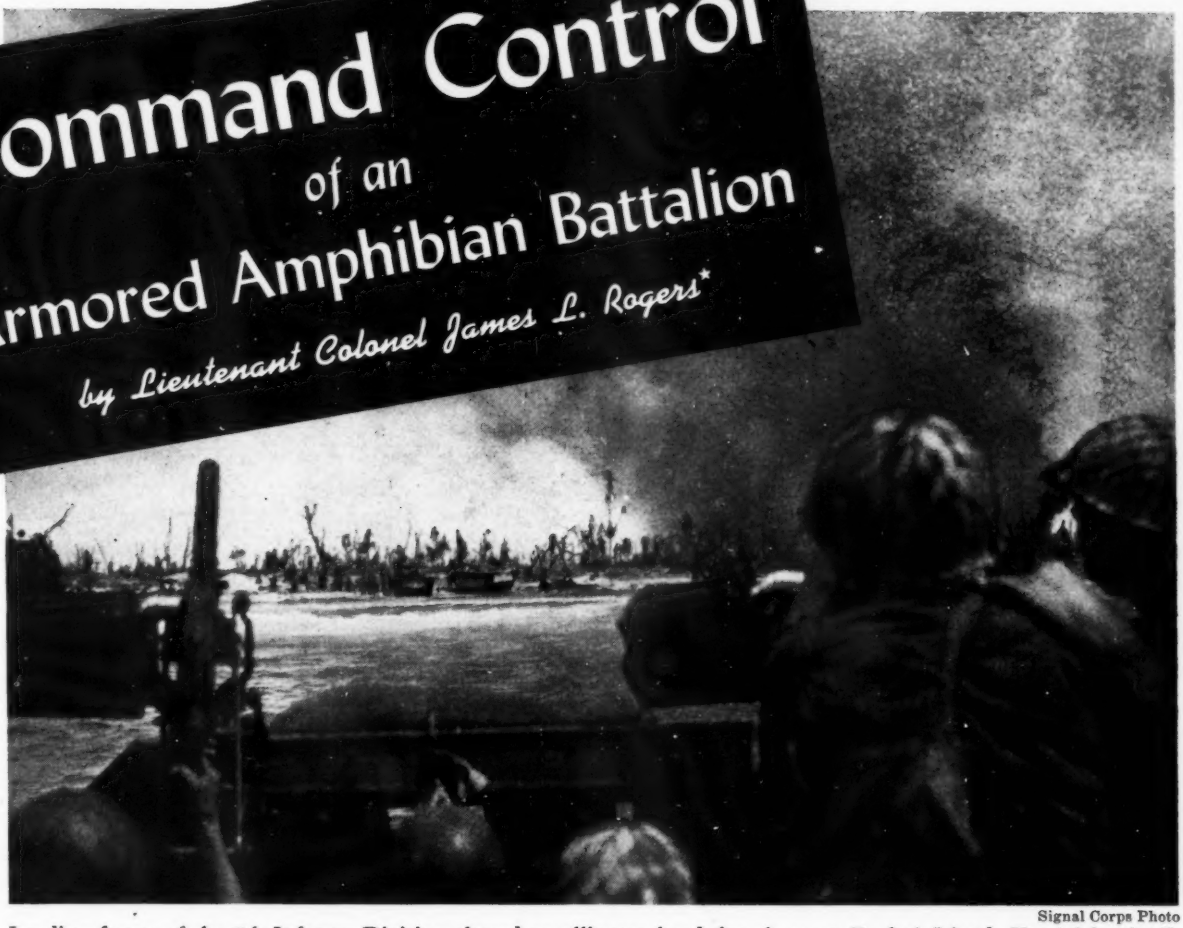
Practical experience in the field has served to throw useful light on the correct positioning of this armor. The side of a tank receives more hits than the front; and, in the average, the hull receives more hits than the turret. If the maximum basic protection is to be obtained for those vulnerable places disclosed by battle experience, care in the angling of the plate is as vital a study as the actual thickness of the armor.

Thus tank design for the future will need to adjust itself to the one cardinal fact that emerges from this survey of tank employment in this war. It is the enemy antitank or self-propelled gun which usually does the damage, and not the enemy tank; and the cardinal fact about these guns themselves is that they rarely, if ever, fire head-on.

The Cromwell tank, which made its debut in Normandy, is one of the latest types of British cruiser tanks. It incorporates a 75mm gun and a high capacity British engine. It proved to be a most reliable and effective addition to British armor on the Normandy front. This picture was taken during a visit of Mr. Churchill to British troops in Britain and shows the Prime Minister inspecting a Cromwell tank.

Command Control of an Armored Amphibian Battalion

by Lieutenant Colonel James L. Rogers*



Signal Corps Photo

Landing forces of the 7th Infantry Division aboard an alligator head for shore at Enubuj Island, Kwajalein Atoll.

PROBABLY the hardest phase of an amphibian operation is maintaining control of the operations of the amphibian unit. The operating of this control does not merely apply at the time of actual combat but also comes during the preparation phase, prior to actual departure for the combat zone. This control hinges upon two factors, namely; proper communication, and adequate disposition of liaison officers with the headquarters with which direct contact is necessary.

It is first necessary to find out the tactical mission of the organization, how it fits into the general plan, and what specific jobs it is to perform. From an analysis of these things the unit commander can readily find out with whom he must have communication, and what type of communication is necessary. An amphibious operation without proper communication is not an operation, but a melee, and the loss of lives through such a melee is tremendous.

It is necessary to determine the following:

(a) What types of radios are necessary, and what types are available.
(b) How many channels are necessary.
(c) What persons should utilize these channels.
(d) Where should the liaison personnel be placed.
(e) What kind of communication should they have.

The normal tractor battalion, usually attached to a regiment for an amphibious operation, has sufficient vehicles to carry ashore two assault battalions. Normally the tractor company is attached and is under tactical control of the commander of the infantry battalion that is carried in by this company. Thefore, initially, the tractor battalion commander and his staff is employed by the regimental commander as a staff for LVT's.

The infantry regimental commander normally sets up his advance command post on the control vessel which is responsible for the landings of personnel and supplies on his beaches. If the tractor battalion commander rides on this control vessel with the infantry regimental commander, then the three branches controlling factors in the landing can be closely coördinated —the naval beach master or control officer, who is responsible for the proper landing and control of all traffic on his beaches; the infantry regimental commander, who is vitally interested in this operation since upon it depends his future operation ashore; and finally, the commanding officer of the amphibian vehicles which are carrying the troops and supplies ashore. With all three of them together, they can decide any unforeseen problems and have a vital effect upon the landing.

*Commander, 708th Amphibian Tank Battalion during Kwajalein and Eniwetok operations and landings on Saipan and Tinian.

If the regimental commander has his command post on the transport rather than on the control boat, it is still desirable to have the tractor battalion commander ride on the control and have his executive officer back on the transport as liaison with his regimental commander.

It is believed advisable to have an officer from the tractor battalion staff ride on the sub-control boat of each beach, which accompanies the first wave into the beach and then, pulling off to the flank, acts as a dispatcher for all types of craft entering and leaving the beach. It is the normal practice for tractor units to rendezvous with this sub-control boat in a position on the flanks of the boat lane, out of range of small-arms fire, when they have unloaded their troops or supplies on the shore.

An amphibian tank battalion will normally be attached to one of the higher headquarters controlling the landing. At Saipan the amphibian tank battalion was attached to the Marine division. The division split the battalion between the two assault regiments, with two tank companies assigned to each. The regiments, in turn, assigned each tank company to support an assault battalion.

In such a case, the tank battalion should furnish a liaison officer to each regimental commander to act as an amphibian advisor on his staff. The tank companies should furnish liaison officers to the assault battalion which they are supporting to act as an amphibian advisor on the battalion commander's staff. Of course, these liaison officers should have radios set up on proper channels so that they are able to contact the persons with whom they are most likely to deal. In the case of the tank company liaison officer, it will be his company commander, the assault battalion commander, and probably the tank Battalion commander. In the case of the regimental liaison officer, it will be the tank companies that are attached to his regiment, the regiment itself, and probably the tank battalion commander.

If LST's are permanently assigned to the battalion, it is also advisable to establish some kind of communication or liaison with the LST group commander. A ship or two may be pulled out leaving part of the amphibian vehicles without a home. I found that by setting up a rear command post on the command ship of the LST Group, and using my executive officer as a liaison officer, I was able to keep up with, and govern the movement of the LST's to fit into the movement and care of the tractors. If radios are available, it is well to have one per LST to set up topside for intra-battalion communication when the battalion is loaded.

It has also been suggested that an LVT representative be placed in the boat of each naval wave guide officer to help him in the handling of the tractor waves. This, in my mind, is not desirable because:

1. Sufficient LVT officers are not available for this duty.
2. The naval wave guide officers are with the wave actually only a short period of time. Hence any officers with them would be lost to the battalion except for this short period of time.
3. If LVT officers are necessary with the naval guide

Signal Corps Photo

Carrying men and equipment of the 7th Infantry Division, assault boats and alligators approach the shores of Enubuj Island, at low tide. Mother ships can be seen in the distance. As soon as possible, amphibians become shore-based.

officers, why not just do away with the naval guide officers?

If the Naval Guide Officer knows where to pick up his wave, where its rendezvous area is situated, and where it is to land, the LVT Officer in charge of that wave should be able to do the rest.

As an example, suppose that a tractor battalion is attached to the assault regiment of a division landing in column of regiments. The regiment is landing on two beaches, one battalion on Beach Red 1 and one battalion on Beach Red 2. The tractor battalion commander is with the regimental commander on the senior control boat. The infantry battalion commanders are each riding in a "free tractor" with the commander of the tractor company that is carrying his battalion in. Two LVT officers are riding on the 2 sub-control boats which will flank the first wave on its run to the beach, and then pull off to the flanks of the boat lanes and act as dispatchers and rendezvous points for all craft after they have unloaded on the beach. Initially, the battalion rear CP has been set up on the command ship of the LST group. The time is H minus 90.

The LST's are now in a position approximately 800 yards in rear of the line of departure; the tractors are being launched; and the naval wave guides, flying the "Wave Flag," have picked up their waves, and are guiding them to their proper rendezvous area. The tractor carrying the LVT officer in charge of the wave is also flying the "Wave Flag."

The waves have been formed in their proper position, but the current is carrying them off to the right flank of the boat lanes. The naval control officer contacts the LVT battalion commander and they decide to move the waves back up into position. The naval control officer contacts his naval guide officers by radio and explains the situation to them. The LVT battalion commander does likewise with his company commanders, and the units are moved into their proper positions.

It is approximately time for the first wave to cross the line of departure, so the naval control officer has the "One Flag" run up. This is the signal for the first wave to get its final position and prepare to cross the line of departure. The battalion commander sees that the waves get their proper positions and proper intervals.

The "One Flag" is lowered, and the first wave, flanked by the sub-control boat, moves across the line of departure toward the beach. The following waves close up on the line of departure automatically, or by radio order from the naval control or battalion commander. The "Two Flag" is then hoisted. This procedure will continue till all waves have crossed the line of departure and are on the way to the beach.

When the tractors have unloaded ashore, they return to the rendezvous area to the flanks of the boat lanes, where they are ready for further use. The regimental commander decides to send in his reserve battalion on Red Beach 1. The naval control officer and the battalion commander, after consulting, decide to move the tractor company that has rendezvoused to the flank of Red Beach 2, over to a position flanking Red Beach 1, so that all tractors can be used for the trans-shipment of troops in the minimum of time.

The first wave of 6 LCVP's carrying troops are sent across the line of departure with orders to report to the sub-control of Red Beach 1 for trans-shipment of troops to LVT's. The naval control officer calls the sub-control officer and tells him that 6 LCVP's are on their way for trans-shipment of troops to LVT's, which are to land them on Beach Red 1. The sub-control officer asks his LVT representative to prepare twelve tractors for this trans-shipment of troops. This procedure is carried out until all troops and assault supplies have been delivered to the proper beaches.

If at any time the beach master ashore needs tractors for the evacuation of casualties or for the transportation of supplies to the front line troops, he notifies the senior control officer. The senior control officer will then ask the tractor battalion commander to have them dispatched to the proper place, or he can give his request through his sub-control officer, who can have the LVT representative dispatch them to the proper place.

If vehicles are in need of repair, they should contact the battalion commander who, in turn, will have the maintenance LST move in and pick up the vehicle by contacting his executive officer at his rear command post. Again, if a maintenance tractor is available, he can order that tractor to the position of the disabled vehicle.

When it is time for the tractors to load that evening and the battalion commander has obtained a release to load from the regimental commander, he calls his rear CP and asks to have the LST's moved in to pick up the tractors. At this time the executive officer will assume control and when the LST's have moved in he can guide the tractors to their proper LST and help them load. He receives their vehicle and personnel casualty reports, helps them out with maintenance problems, and submits the final report to the LVT battalion commander. By use of the deck radio any order for the following day's operations can be passed out to the companies.

In this exercise the battalion commander has had perfect and absolute control of all his vehicles at all times. He was ready for any emergency, and could pass the proper information on to his personnel in order to change or correct any plans. In his position, he was able to contact, either by his own communication set-up or by the naval control communication set up, anyone whom it might be necessary for him to contact.

After D Day, for the purpose of unloading supplies, it is advisable that all tractors be relieved from units and placed under one control under headquarters controlling the landing. When space is available ashore, it is believed best for all tractor battalions to become shore-based. Then all battalions are readily available and can be parcelled out according to the priority of the unloading that has to be carried out.

AIRBORNE

British Airborne troops receive supplies near Arnhem, Holland, during their stubborn 8-day fight which began on September 17, 1944. Army photographers who crossed the lower Rhine with them brought back pictures of their gallant stand. Here, glider-borne jeeps and trailers rush along a Dutch road as more supplies land near a damaged glider.

British Official Photograph

by Brigadier E. C. Anstey, D.S.O.*

SUPPLIES have been dropped from the air on many occasions in the present war, and in considerable quantities, but until recently, most of the occasions have been abnormal and under desperate conditions, such as existed at Stalingrad and elsewhere in Russia. Nowhere had the problem of supplying troops by a regular air service been studied until the British and the Americans formed their airborne divisions in the West and began novel airborne operations in the East.

It is perhaps not surprising that this should be so. Civil air transport was certainly making strides when war broke out. In the United States attention was paid chiefly to passengers and mail; Russia claimed to be handling the greatest amount of freight; and Britain was busy establishing her "Empire Air Mail Scheme" designed to carry first class mail to the whole Empire at ordinary rates. The German Lufthansa Junker airliners were carrying 40-42 passengers; the Russians had completed a 65-passenger landplane weighing about 44 tons; the Short flying boats were carrying 74 passengers. These were the civil prototypes of military transport aircraft.

On examination, however, it was found that the military value of air transports was questionable for four major reasons: Air transport was uneconomical, restricted in bulk, dependent on weather, and extremely vulnerable.

The uneconomical aspect of air transport involved not only finances—which counts for little in total war—but also the affect on aircraft production, manpower, and gasoline consumption. Modern military supplies are colossal in amount and often awkward in bulk; their delivery must be punctual; and the size, clumsiness and slow speeds of giant machines make them easy targets. Above all, the primary task of the air forces of the belligerants was the expansion of their fighter and bomber squadrons. This was so markedly the need in the British and Dominion Air Forces that their development of air transport and supply had to be postponed.

*Military correspondent of the *Sunday Times* and *Daily Sketch* (London).

German Development

On the other hand, Germany, with her initial vast air superiority over her victims, found opportunities for the use of transport aircraft in which they were immune from attack. It is believed that in the Polish campaign gasoline was flown to leading Panzer units. Certainly, some light cross-country tractors were landed. In Norway supplies were dropped from the air to German troops temporarily isolated in the Narvik area.

In Crete practically all supply had to be by air. By a single transport fleet of some 700 aircraft, 30,000 men were landed and had to be maintained by air until Britian's fleet withdrew. The success of this operation was due mainly to the 2,000-ton carrying capacity of 480 German transports and 1,440 gliders.* As the daily requirements of a division may be taken as about 100 tons of food and 160 tons of ammunition, the supply of three or four divisions in the absence of any air opposition or strong antiaircraft defense presented no great difficulties.

Nevertheless, the German losses at Crete were so great that they themselves described them as tragic, and it is to be noted that they have never again attempted an airborne operation on a big scale. Since then German fleets of transport planes have been used in exceptional circumstances as a last resort for the supply of isolated troops who could not be reached by any

*Major F. O. Miksche in *Paratroops*.

other means. This was done at Staraya Russa and at Halfaya, in Africa, and during the first deep advance into Russia, while railway tracks were being repaired and Russian air opposition was still weak. According to the German press, at that time a single squadron of German Junkers 52's delivered 2,700 tons of war material to the front and evacuated 2,831 wounded with the loss of only three of their 15 aircraft in 7 weeks.

It was a different story in Africa where the Allied air forces had grown in strength. There it became manifest that to make air supply reliable and feasible local command of the air was essential. Thus, as air superiority passed to the Allies, so did the opportunity for the use of air transport.

Methods of Supply

The Germans had developed three methods—dropping by parachute, carriage in transports, and carriage in gliders.

Dropping by parachute is essentially an abnormal method, extravagant in machines and limited in loads. It is used only when landing is impossible, as over jungle or an enemy-infested area.

Air transports can return when empty, can defend themselves to a minor extent, can be converted into ambulance planes for the removal of wounded, and can carry small vehicles and guns. The Italians established a regular supply service to Abyssinia by a southern route over the desert from Libya when they were cut off by all other means and even carried complete dismantled CR 42 Fighters inside their heavy transport machines. But the fuel consumption of transport aircraft is so high as to affect their useful load over a long run. On a 2,400-mile journey a Boeing J. 14, with a fuel reserve of 4½ hours, needs 4,000 gallons—a weight which alone amounts to 29% of the gross load and 73% of the useful load.

Gliders, on the other hand, are cheap to make, carry heavy and bulky loads, and can be built for end-loading. This greatly increases the speed and ease of both loading and unloading. German Merseburg gliders carry a 5.91″ field gun with ammunition but require two or three Ju. 52's to tow them. Under tow, however, gliders have to be handled carefully, and since they reduce the speed of the towing aircraft by not less than 25%, they are dangerously vulnerable to attack. It is clear, therefore, that complete local air command is necessary before gliders can be used.

When the British and Americans were in a position to develop air transport, they had both German and Russian experience to guide them, and their late start was soon counterbalanced by the unequalled opportunities for air supply which occurred in China, the Pacific, and Burma.

Value of Air Supply

Sudden emergencies may arise anywhere at any moment. On the liberation of Paris, for example, an urgent request was received at 6:30 p.m. on a Saturday evening for 500 tons of food to be flown into the city the following day. Not only was the consignment dispatched as requested and delivered safely, but similar loads of medical supplies, vitamins, cocoa, coffee and sugar were flown in daily from England for the next week or ten days.

On the other hand, for some months preceding the invasion the supply of the Maquis in France almost amounted to a regular service. Both the transport aircraft and bombers used landed on secret airfields held by the F.F.I. or dropped containers in prearranged areas. These containers, made of 3-ply wood with a light metal covering, were shaped like a bomb and thus could be carried conveniently in the bomb racks, from which they were dropped by parachute.

A light tank backs into a British Hamilcar glider under its own power. The Hamilcar Glider was "tailored" from the beginning of its design to fit round the Tetrarch, a fast tank weighing over seven tons. Many Hamilcars were used in Holland September 17, 1944.

British Official Photograph

A regular air supply service, however, has been brought to a higher pitch in China, the Pacific and Burma than anywhere else. British and American pilots are flying more material over the Hump into China than was ever carried by the Burma Road. Throughout the year, almost irrespective of weather, they are delivering gasoline, bombs, jeeps, ammunition, artillery, small arms, clothing, aircraft engines, and spare parts.

The Australians could not have cleared New Guinea, as they did so brilliantly, without the supplies they received by air, nor could those supplies have arrived in such volume and with such regularity without the supremacy established by the Allied fighters. Of all the lessons learned in those theaters concerning air supply none has been assimilated more thoroughly than the lesson that airfield construction goes hand in hand with supply and that the airfield construction companies are an integral part of a great service.

Nevertheless, in the Pacific air supply has remained supplementary to seaborne supply. It is only in Burma that the task of maintaining a sizeable force for weeks on end has been shouldered exclusively by the air forces. The astonishing operations inaugurated by the late Major General Wingate had no communication whatever with the base except by air. Of course, the force was not large; it existed on a Sparatan scale of a "luxury drop," and its guerrilla tactics did not demand the heavy ammunition resources of a European battle. Enough was done, however, to prove that Burma is an unusually appropriate theater for air supply, as the difficult and mountainous nature of the country makes ground supply a tremendous problem. The Allies hold air superiority and Japanese antiaircraft defense is poor. Land communications are so long and bad that for operations to wait on their repair or construction would impose intolerable delays and would cramp maneuver.

The freedom conferred by air supply offers the means to surprise the enemy—a moral weapon which is even more effective against the regulation-bound Japanese than against western races. Owing to the weakness of Japanese air forces, gliders can be used with unusual freedom. Experiment in picking up the tow ropes of undamaged or repaired gliders have shown that where gliders have landed in spaces too small for powered aircraft they can still be salvaged and need not be written off as lost.

Finally, the moral effect of an efficient maintenance of troops by air organization is stupendous. The knowledge that casualties will find themselves spared the weary joltings of the old nightmare journeys by stretcher along jungle paths, but instead will fly in comfort direct to modern hospitals in India, heartens men immensely. As Mountbatten's troops approach the heart of Burma and the airfields in their grasp multiply, it is possible that the supply of a whole army by air will overleap hundreds of miles of jungle and mountain and be the main factor in the defeat of the Japanese in Burma and China.

Invasion of Crete

For an hour, it was just a confusion of mad noise and flying steel. The red earth erupted in fountains where the bombs, anything from a hundred to five hundred kilos, exploded. Antiaircraft and concentrated small-arms fire shot down some of the raiders but the German pilots seemed insensible of anything but their objectives. They simply flew through the fire, two abreast, and blitzed gun emplacements and weapon pits.

The thunder of bombing, the crackle of machine gunning died suddenly. The bombers and fighters drew off. And now the air was filled with the drumming of engines, like the beat of great wings. They came in, the Junkers 52s, the old Aunty JUs, flying slowly in formations of three. And with them came ghost planes, planes that made no sound—gliders.

Many of the British antiaircraft gun positions had been silenced in the air blitz, but a few still remained in fighting trim. The Junkers and the gliders were flying low. They were easy targets, as easy as fat pheasants to a crack gunshot, and the gunners let them have it. The men on the ground took at least partial vengeance in those minutes for the battering they had suffered from the Lufftwaffe. Here and there, one of the lumbering aircraft lurched and nosedived into the ground. Some burst into flame, and the Germans they were carrying burned alive if they did not break their necks first. But for every aircraft hit, twenty flew on through the ruddy brown fog of dust stirred up by the bombs that had heralded the invasion. They were like circus horses trained to a routine. . . .

Most of the paratroops dropped from heights of 200 to 300 feet. They fired their tommy guns and hurled hand grenades as they floated down, but their aim was wild as they swung in the cords of their parachutes. They were only a few seconds between aircraft and ground, but in those few seconds they were easy targets for any man who could aim a rifle and press the trigger. Young Germans died in scores above Canea, Maleme, and Galatos that morning. One instant, a man would be alive, firing his tommy gun with one hand, steering his chute with the other. The next, he would jerk, then sag dead in his harness, and his tommy gun would go tumbling to the ground below him. . . .

Gliders were sliding to earth simultaneously with the paratroop landings at the three focal points of the attack. Some were shot up in the air, some as they grounded. A few capsized on the rough surface and broke the necks of the men they carried. But a good proportion, notably of those which crash-landed on the beaches and in the dry bed of the Tavronitis River, west of Maleme, completed their task of getting down and unloading their men. Each glider carried twelve men, armed with mortars, machine guns, tommy guns, and hand grenades. These men were ready to fight the moment they sprang out onto the ground. . . .—*Airborne Invasion,* by John Hetherington. Duell, Sloan, and Pierce, 1944.

Signal Corps Photo

FRANCE

December '44

Above—Snow-covered cars of a cavalry reconnaissance unit with the Seventh Army, France, move down slippery roads lined with snow-covered trees. 11/12/44.

Below—Troops of a cavalry reconnaissance squadron use the scarred, outdated Maginot casemate as a shield from which to observe enemy activity. France, 12/13/44.

Signal Corps Photo

Reconnaissance in Nom

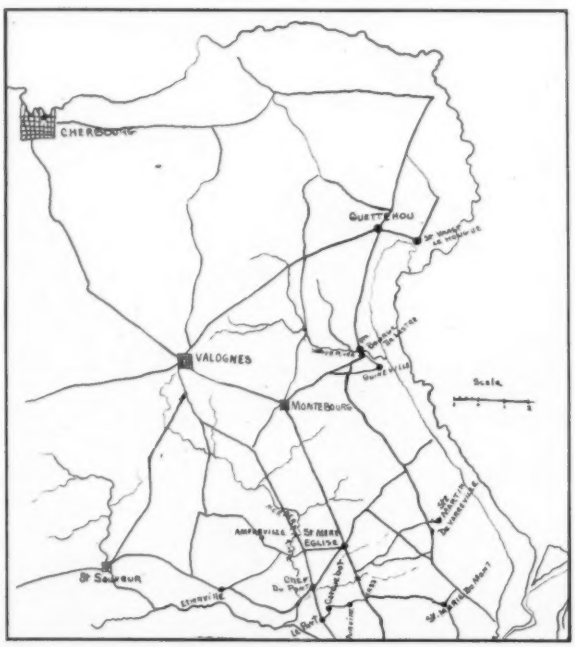
—In Support of Airborne Troops

IN an amphibious operation combining the use of airborne troops, the paratroops and glider-borne infantry have a vital rôle in landing behind the beaches and disrupting communications. They prevent mobile enemy reserves from shoving the beachhead back into the sea; they attack local reserves held for counterattack purposes; and they knock out vital enemy artillery firing against the beaches.

Mechanized reconnaissance troops can serve these airborne forces admirably if they are landed early enough and are able to make their way inland past the beaches. Such cavalry has an important mission in screening for the seaborne elements, acting as liaison between scattered paratroops and glider units, and reconnoitering known enemy installations behind the beaches.

The following record of the 3d Platoon, Troop "B," of "Y" Reconnaissance Squadron (Mecz), which took place in the assault operations on the Normandy beach, is believed to be an account of the first such unit employed as a seaborne element in direct support of an airborne force.* The employment of this platoon, from the time that it landed on the beach at H plus 175 minutes on June 6 until it was joined by the rest of its troop three days later, served to prove that the principles of reconnaissance as laid down in field manuals and training directives are sound, but the small cavalry unit commander must be agile enough at all times to apply these principles in a manner which fits the situation in which he finds himself at any time, or with respect to any type of terrain.

*See last paragraph "Reconnaissance in Normandy—'Y' Cavalry Reconnaissance Squadron," November-December, 1944, CAVALRY JOURNAL.



For this operation the 3d Platoon, commanded by 2d Lieutenant Gerald Penley, was attached to a mobile column consisting of a company of tanks, a company of glider troops and a small infantry force which were the seaborne elements of the 82d Airborne Division. The mission of the platoon was to reconnoiter routes and act as a screening force for the column which was to land on the beach at H plus 175 minutes and proceed to the headquarters of the 82d Airborne Division. This headquarters was to have been dropped by parachute and glider some 6 hours earlier in the vicinity of Ste. Mere Eglise. The platoon disembarked from the LCT on time, but was landed a half mile below the place originally intended. As a result, a small mud flat had to be crossed instead of the firm sandy beach which had been anticipated. Because of this mud flat most of the vehicles of the platoon were drowned out in landing and had to be towed ashore. During the half to three-quarter hour delay, there was considerable congestion and confusion on the beaches, while enemy artillery pounding the shore caused the loss of two ¼-ton trucks and 4 men wounded. These casualties were the only ones suffered by the platoon during its entire 3 day operation.

After all vehicles were ashore the platoon moved to a de-waterproofing area about one mile east of Ste. Martin de Varreville, where it waited for the remainder of the seaborne elements of the 82d. By that time it was approximately 1200 hours. (See map.)

When the rest of the column arrived, the platoon commander was ordered to find a clear route to Ste. Mere Eglise. Having learned that Ste. Marie du Mont was in the possession of the 101st Airborne Division, the lieutenant moved his platoon to this town unopposed. From there he moved west to Crossroad 33. At this point a paratrooper told him of seeing German troops on Hill 20, approximately one mile north toward Ste. Mere Eglise. The paratrooper also reported having received small-arms fire and claimed that only one machine gun with several riflemen were holding the point. Lieutenant Penley was ordered to clean it

ɒmandy

The Story of the 3d Platoon, Troop "B," "Y" Reconnaissance Squadron, from H plus 175 minutes to D plus 3.

Troops with assault equipment move along a road in Normandy on D plus 3. Machine-gun ammunition strung around the soldier's neck will soon be pouring through weapon carried by man at left.

out. He took his own and one other armored car, plus one medium tank from the column in the order: armored car, tank, armored car. (Against a known enemy position, his jeeps were useless. He was unable to carry forward his light machine guns and mortars in jeeps because of the open terrain. Only small arms had been reported, and against these his armored cars were invulnerable.)

Upon arrival at the south end of the bridge, approximately midway between the crossroad and the hill, the lieutenant's car was fired on by a 7.6cm antitank gun and some small arms fire. Because of swamps and inundation on either side of the road it was impossible to by-pass the position, so the lieutenant was forced to withdraw to his previous position at the crossroads.

The enemy position was then successfully attacked by the tank company, although three tanks were lost.

The platoon made no further attempt that day to reach Ste. Mere Eglise, but was given the mission of acting as "glider rescue squads." Of the numerous gliders landing in the area, some were burning, others badly broken up, and first aid was being given to the troops in the gliders who could not yet be reached by medical personnel.

At 1000 on D plus 1 (June 7), Lieutenant Penley was ordered to move to Chef du Pont, thence northeast to a rendezvous point approximately 1,000 yards southwest of the town of Ste. Mere Eglise. The platoon's move to this point was unopposed except for occasional sniper fire, which caused no casualties. For this move of his platoon the lieutenant adopted an SOP formation in the following order: 2 machine gun jeeps, platoon leader's armored car, section sergeant's armored car, 3 mortar jeeps, platoon sergeant's armored car and the third machine gun jeep. These vehicles moved by bounds within supporting distance of one another.

(Although the roads had not been swept for mines, the lieutenant was right in leading with his jeeps. As Lt. Colonel Hoy has pointed out in THE CAVALRY JOURNAL, "You cannot waste valuable time in sweeping roads. You have to take chances and apply the principle of 'Economy of Force,'" even with a platoon; therefore, the jeep was used in the point instead of an armored car.)

Upon arrival at Chef du Pont the lieutenant radioed the column that the road was clear to that point. Then he waited for the column to arrive, but when it had not appeared by 1200, he was ordered to the rendezvous point.

On occasions when the platoon received small arms fire it did not halt because it was impossible to determine the direction from which the fire was coming. The road was bounded on both sides by deep ditches backed up by tall hedgerows with very thick foliage and undergrowth, which made it almost impossible to detect any movement, and the platoon commander had quickly learned the lesson, "keep moving." It was very difficult for the snipers, located along the hedgerows and in the trees, to hit a moving vehicle; whereas the minute the vehicle stopped, it presented an excellent target.

As the platoon arrived at the rendezvous point, it started receiving artillery fire so was ordered back to Chef du Pont. There it was learned that the column had arrived earlier and moved to another location by

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★S-2—Cavalry Group (Mecz).

by Major Robert R. Tincher★

a different route approximately one mile west of Ste. Mere Eglise. Then a patrol of two machine gun jeeps, sent to contact the column, failed to locate it, but instead found the headquarters of the 82d Airborne Division, located in an orchard north of the Ste. Mere Eglise-St. Sauveur Highway. Because the patrol was unable to contact the lieutenant by its 510 radio, it rejoined the platoon and reported the location of the headquarters. The platoon then moved into a bivouac area near the original rendezvous point and reported to the 82d Airborne Division headquarters at 1930.

During the night artillery was again received in the bivouac area, and the platoon moved under cover of darkness to a new area approximately ⅔ of a mile away. (By experience it has been learned that once the enemy has registered on a target, he often engages it again "just in case." Therefore, if within range of enemy artillery it is well to avoid previously shelled areas if possible.)

At approximately 1130 on D plus 2 a report was received that approximately 50 German troops had been observed in the vicinity of Carquebut. Two companies of parachute infantry were sent to investigate the report, and Lieutenant Penley was ordered to send two armored cars as an advance party. Preceding the infantry, the lieutenant and his platoon sergeant, each in an armored car, set off on a mission to reconnoiter the town and return. Their orders were to make a complete circle of the town with the armored cars and await the arrival of the infantry at a crossroad north of the town.

While making this circle they received only desultory fire from one or two enemy riflemen. As they arrived at the crossroad, however, a French civilian, waving wildly, reported that 150 Germans were in a barracks just south of the town. When the infantry commander arrived, he ordered the lieutenant to attack this force with two armored cars. The only approach to the barracks being down a very narrow trail, the cars approached in column. As he arrived at the building, Sergeant Jensen opened fire on the upper windows with his .50 caliber antiaircraft gun, and immediately 120 men and 5 officers gathered in the courtyard and surrendered.

The road from le Port to Eturville was then patrolled, but no enemy were encountered, and the platoon bivouacked for the night in the vicinity of Carquebut.

During the night of D plus 2 and 3 the infantry succeeded in forming a small bridgehead over the Merderet River west of Ste. Mere Eglise, and at 1100 on D plus 3 the entire platoon was ordered to move to the bridgehead, there to receive further orders. Although both the bridge crossing the river and the causeway over the inundated area flanking the river were both under artillery fire, there was no other way by which the platoon could get across the water, so it was necessary to move the vehicles singly and rapidly over the bridge and causeway.

Across the river without loss, the lieutenant was informed that a truck column had been reported moving northeast from Etienville toward Ste. Mere Eglise, and was ordered to investigate it. He took the platoon's three armored cars and moved out. About one-half mile farther he met a column of approximately 150 Germans, who immediately hit the ditches on both sides of the road. Farther down the road were three antitank guns in position. The lieutenant's 37mm gun engaged the antitank guns with cannister and succeeded in destroying or dispersing the crews of those guns. While the .50 caliber antiaircraft guns on his car and the two other cars swept the ditches. Proceeding down the road in this manner, they destroyed all enemy personnel in the ditches. Meanwhile, 6 German half-track motorcycles turned out of a side road, and they too were destroyed. The lieutenant then turned his armored cars around and proceeded back to the road junction on the west side of the Merderet River.

During this action a report had come in of a battalion of paratroops which had been dropped in the vicinity of Amfreville and were cut off from any friendly forces. The reconnaissance platoon, with two medium tanks attached, was ordered to contact this force. It moved and upon reaching point "X" received heavy antitank fire. No paratroops were found and the platoon returned to the rendezvous point.

About this time it was learned that the infantry, which had succeeded in extending their bridgehead over the Merderet River by about 1,000 yards, were in danger of a counterattack by a strong force. The platoon's armored cars were sent forward to assist the infantry by fire from its 37mm guns. Because of the terrain, however, it was impossible for the armored cars to leave the road and with the high hedges and small fields the gunners were unable to obtain any fields of fire on the enemy. The cars then withdrew to the rendezvous and patrolled the road from the rendezvous southwest to the next principal road junction as a protection to the south flank of the bridgehead forces. This they continued until dark of D plus 3.

On the morning of D plus 4 the remainder of Troop "B" arrived and went into bivouac southwest of Ste. Mere Eglise.

During these three days the platoon destroyed or captured 300 Germans, including 5 officers; knocked out three 7.6cm antitank guns; 6 half track motorcycles and two 2-ton trucks. Its losses were two ¼-ton trucks and 4 men wounded, all due to artillery fire on the beach during the landing period.

Conclusions

1. On a fluid front, vigorous action against an enemy who is defensive minded will usually succeed. You

cannot stop and hide when fired upon. Instant return of fire will make the defender duck or surrender unless he is in a fortified position.

2. The .50 caliber antiaircraft gun on the armored car is an excellent antipersonnel weapon, and the German was terrified by it.

3. 37mm cannister is extremely effective against any personnel at close range. Rapid action is essential.

4. The M-8 armored car is impervious to German small arms fire.

5. Terrain encountered in Normandy consisted of narrow, sunken roads lined with mud walls 4 to 5 feet high and thick and covered with dense foliage. Small fields averaging 30 to 40 by 100 yards were similarly lined. Thus observation was restricted and fields of fire limited except along main roads. (Secondary and tertiary roads are narrow, often steep, with sharp, frequent turns.) The terrain was excellent for constructing road blocks, at which the Germans are skilful and cover with antitank fire whenever possible.

—In Capture of Bourge de Lestre

"Y" Reconnaissance Squadron in Cherbourg Campaign

DURING the course of the Cherbourg Campaign the many and varied missions given mechanized cavalry reconnaissance squadrons called for all of the resourcefulness of all echelons in meeting new and unexpected situations.

The German defenses extended in depth not only along the coastline of the peninsula, but into the interior as well. As the enemy fell back on Cherbourg he dug in deeper and, although morale in general was low, the German soldiers continued to fight well if their officers were with them.

Thus, reconnaissance had to become more and more aggressive, and strong points had to be reduced instead of merely reported and by-passed. In fact, by-passing would have been impractical, if not impossible, because of the terrain and the extension of enemy installations. The following account of the action of one cavalry reconnaissance squadron illustrates this point.

The Reconnaissance Patrol

On the 16th of June (D plus 10) the "Y" Reconnaissance Squadron (Mecz) relieved the 22d Infantry and established a counterreconnaissance screen along the high ground extending 4,000 yards west from Quineville. During the night of the 17th and 18th it received constant interdiction and harassing fires from enemy artillery and heavy mortars, while enemy patrols attempted to penetrate the screen. (See map, page 12.)

The squadron, on the other hand, was also sending patrols along the Sinope River to report any enemy contact, possible crossings, and conditions of bridges. Incidentally, the only bridge intact was the main highway bridge south of Bourg de Lestre and at no time did the enemy attempt to demolish it.

Troop "C," commanded by Captain Howard C. Bone, was extended along a 1600-1700 yard front with a strong point of two light machine guns and a 60mm mortar near the left flank. On the left, contact was made with the 22d Infantry, and on the right with Troop "A."

Lieutenant Keinath and 6 men were stationed at the main bridge for observation, but the only enemy observed on the 17th and 18th were a few dismounted men; night patrols were driven off by fire.

In order for Troop "C" to maintain its position on the high ground it had to drive the enemy from Bourg de Lestre and relieve the pressure of heavy mortar fire on the ridge.

At about 1800 hours on the 18th, Troop "C" was ordered to send a strong patrol across the river to reconnoiter crossroad 21. Assigned this mission, Lieutenant Harry Gardner's 2d Platoon was to leave at 0300 hours. Meanwhile, Lieutenant Keinath and the 6 men at the bridge were to move in advance of Lieutenant Gardner, reconnoiter the crossroad, and remain in observation until the 2d Platoon arrived.

These missions so depleted the Troop "C" line that it was necessary to use headquarters troops for observation. In fact, troop cooks manned an abandoned German OP, sunk into the top of a hill and equipped with a periscope. (Incidentally, the OP was quite luxurious —complete with beds, electricity, a kitchen, and *air conditioning*.)

Lieutenant Gardner and the 20 men of the 2d Platoon who formed his patrol, moved out across country at 0300 and arrived at the bridge. There they picked up a bantam with a SCR 510 for use in contacting troop headquarters and left it under cover at the bend of the road just north of the bridge.

At 0530 the patrol made contact with Lieutenant Keinath and the 6 men at the crossroad. The lieutenant reported that two of his men, in the second floor of a house just north of the crossroad, had excellent observation of the crossroad itself and the road to the north; the other men were in the ditches on both sides of the

M-5 light tanks, used on combat reconnaissance mission, advance along a road in Normandy a few days after D Day.

road south of the crossroad. He also reported that there were sounds of digging and other activity in fields northeast of the crossroad and that he believed there was a machine-gun nest in a house east of the road about 300 yards south of the crossroad.

In the Cherbourg Campaign the German's local security at night was often very poor. Positions were seldom outposted, and patrolling was reduced to a minimum. This trait had enabled the lieutenant and his men to pass within 20 yards of this machine gun without detection.

The 2d Platoon was then disposed to cover all approaches to the crossroad, and the two officers returned to the radio to report to Captain Bone, who meanwhile had left the CP on his way up for a personal reconnaissance. Lieutenant Gardner met him at about 0630 and explained the situation.

Three Germans came out of the house, which had been suspected of having the machine-gun nest, and Sergeant Stater, who had been observing, tossed a hand grenade and destroyed the crew. Immediately, fire started from all directions, and a force of approximately 50 Germans moved toward the crossroad from the field where previous activity had been noted. The German officers called on the patrol to surrender. As another enemy force approached from the west, a sharp fire fight developed, and at about 0930 Captain Bone ordered the patrol to withdraw back across the river.

The two men stationed in the house at the crossroad were captured after expending all of their ammunition. Reports state that by sniping from the windows they accounted for 50 or 60 enemy before their supply was exhausted. These two men were later recaptured in the fall of Cherbourg. *The principle of staying well back in a room to avoid detection really paid off in this case. Both men did this, and created a great deal of confusion among the enemy, who were unable to determine where the fire was coming from until after the ammunition had run out. The men were finally driven into the open by the enemy throwing grenades in all buildings in the area.*

At 1027 the reconnaissance patrol reported to the squadron CO that the crossroad was strongly held by about a reinforced company; that there was some activity in the village, and that no antitank guns were observed in the vicinity of the crossroad. Whereupon, the squadron commander decided to attack the crossroad and town with his tank troop, supported by the fire of the assault gun troop. This attack, if successful, would free the main road north along the coast to Quettehou and St. Vaast la Hogue.

The Tank Attack

On the night of June 16, Company "F" of the cavalry reconnaissance squadron (mecz) had been bivouacked in an orchard just south of the Quineville-Montebourg road on the reverse slope of the ridge. Troop "E" was in battery position near by with an OP on the forward slope of the ridge just west of the north-south road through Bourg de Lestre. Fire direction was by 510 radio.

Early on the morning of the 19th, Company "F" had been alerted for movement to support any sector of the squadron zone and was prepared to move on 10 minutes notice.

At 1400 hours the squadron CO and Company "F" commander, Captain Christianson, were at the OP when the company was ordered to attack. Troop "E" was to support the attack on squadron order.

At 1415 the troop was in column with an interval of 75 yards between tanks, and it was decided that the initial attack be made by one platoon. The rest of the company would be committed as the action dictated. The commander's tank was moved to the vicinity of the OP, and the attack was directed by radio. The head of the column was at the crossroad in rear of the OP.

At 1425 the 2d Platoon, under Lieutenant Sam T. Mitchell, advanced in column. The bridge over the Sinope River was still intact, and the platoon moved rapidly toward the crossroads. Troop "E" opened up with a five-minute preparation with HE and ended with two volleys of WP, laid down on the highway just south of the crossroad.

The lead tank, on breaking through the smoke at the crossroad, saw an antitank gun approximately 100 yards to the front.

The enemy is very agile in the positioning of his antitank guns. He moves them rapidly from position to position and camouflages them expertly. Many times during the Cherbourg Campaign no guns were reported where, in fact, they did exist. Sometimes they escaped detection because of excellent camouflage, and sometimes they were moved in after patrols had returned. A good rule of thumb is to figure that wherever they should be is generally where they are.

Moving tanks up to an attack under a smoke screen is excellent if terrain and wind permit, but such tanks must be prepared to fire upon any target of opportunity that is presented. Jerry does not like our WP and is helpless under a concentration of it.

Three rounds of HE at the antitank gun knocked it apart and the bow machine gun destroyed the crew. (The bow machine gun, used to spray hedges on both sides of a road, leaves the turret guns free to bring fire on more profitable targets.)

The lead tank continued past the crossroad, stopped, and covered the approach from the north. The second tank moved up and covered the first tank. Numbers three and four covered the approaches from the east and west, while the platoon leader's tank covered the rear. At 1435 the platoon leader reported that the platoon, after seizing the crossroad, had sighted but few infantry, but that it was receiving mortar fire.

The squadron commander then ordered a reconnaissance of the railway station, and the 1st Platoon, under Lieutenant Kiffin W. Browning, was ordered to pass through the 2d Platoon and reconnoiter the station. At 1440 the 1st Platoon moved out, and when the lead tank approached the crossroad which, by this time, was clear of smoke, it discovered another antitank gun, which had been under the smoke screen and had thus been by-passed by the 2d Platoon. Meanwhile, the enemy had turned the antitank gun around, facing north, and waited for the smoke to clear to engage the 2d Platoon, which had already passed through. This certainly indicated that the enemy did not suspect the presence of more tanks, and had made a definite tactical blunder in leaving his rear unprotected. The WP also probably confused the enemy into thinking that no more tanks would follow up the smoke.

One round of HE from the lead tank of the 1st Platoon hit the ammunition supply of the gun and the whole thing blew up. The 1st Platoon then passed through the 2d Platoon at the crossroad, and moved on to the railway station, where it surprised and destroyed a force of about 40 Germans.

Sergeant Hartin in the lead tank of the 1st Platoon spotted a cave in the side of a slope behind the station and fired three rounds of HE into it. It was an ammunition dump, and exploded with terrific force. Meanwhile, another tank flushed a small column of infantry, attempting to move toward the town from the northeast, and destroyed it.

By this time, fire from mortars and artillery was falling consistently on the crossroad, so both platoons were ordered to withdraw; the 1st to cover the withdrawal of the 2d, which was to return by way of the town.

Commanders of small tank units must be impressed with the fact that they have a hard hitting, mobile force, but one which becomes extremely vulnerable to heavy mortars and artillery fire if forced to halt for long. Once they have hit their objective they must be reinforced or withdrawn. Tanks invariably draw artillery and heavy mortar fire, and any display of tank strength will cause the enemy to open up with everything he has.

The 2d Platoon withdrew through the town and, after reorganizing at the bridge, moved back to its former position behind Hill 54. The 1st Platoon then withdrew from the highway.

During the entire action the ridge was also being heavily shelled, so that the whole troop had to withdraw to the old bivouac area where it closed at 1530.

The enemy withdrew during the night and it was later learned that the column consisted of about 150 infantry, mostly wounded, two antitank guns, and two field kitchens.

At an OP overlooking Cherbourg, observers report the accuracy of artillery fire on strategic targets. "Y" Reconnaissance Squadron was instrumental in the rapid clearing of the Cherbourg Peninsula and fall of the city that opened a main French port to the Allies.

Normandy to Brest—

by 1st Lt. Thomas J. Fernley

RECONNAISSANCE on the beachhead was a very difficult proposition. From the moment that the first elements of the assault regiment of the 29th Division hit Omaha Beach on the morning of 6 June 1944 until the capture of St. Lô 42 days later, the division was engaged in close combat with the enemy, and contact was seldom lost. The nature of the terrain in Normandy—high hedgerows bounding the 4 corners of almost every field—made vehicular reconnaissance virtually impossible or at best an extremely costly business.

As a result the 29th Cavalry Reconnaissance Troop (Mecz) was assigned a variety of missions during those bloody days of fighting as the division fought its way south toward the key communications center of St. Lô.

The troop (less the 1st platoon) was originally scheduled to land at 2200 on the night of D Day, but the unexpected heavy enemy resistance put a priority on infantry and artillery, and we had to sweat it out until 1500 on the afternoon of D plus 2 before our LST was called in by the beachmaster.

The 1st Platoon, landing dismounted at H Hour with the 116th Infantry, was equipped with SCR 300 radios in order to report back to division headquarters on the progress of the landings. The platoon was divided into 7 teams, each equipped with one of these radios. This set-up worked out extremely well and for some time provided the only radio communication which division headquarters had with the beachhead forces.

The troop's first mission after landing was to help mop up remnants of enemy resistance around Pointe du Hoe, where the enemy had strong artillery concentrations.

Reaching the 101st Airborne

During all our training in England, which amounted to almost 2 years, no one thought that the troop would be used as an assault force, but on the afternoon of D plus 3 it participated in as novel a form of attack as witnessed in over 5 months of combat. Here was the situation:

The bridge across the Vire River had been at Auville-Sur-le-Vey. Since early morning Company "K" of the 175th Infantry had been fighting to reach the river but had been prevented by heavy enemy fire from the opposite shore.

To solve the problem the Reconnaissance Troop made numerous rafts from bits of odd lumber which were found, then used its M-8's to carry the rafts right up to the river and dump them. The troop then deployed all its firepower—11 M-8's and 9 60mm mortars—and from a range of 600 yards assaulted the town with everything it had—37's, .50 caliber machine guns, and mortars. Under cover of this barrage, Company "K" advanced to the river and, using the rafts as means of transportation, established a successful bridgehead with only minor casualties.

That night Army engineers repaired the bridge, and on D plus 4 the troop pushed reconnaissance to the outskirts of Carentan where it met strong resistance. During the day patrols contacted the 101st Airborne Division, which, for 3 days had been fighting a war of its own on the Cotentin Peninsula. I never saw a group of men as happy as they were to see us that day—completely exhausted and battle-weary though they were.

Assault on St. Lô

One of the finest accomplishments of the troop was the occupation of St. Lô on 18 July 1944.

Early that day it had become apparent that the city could not hold out much longer. The final goal, the prize for which so much blood had been shed, was at last within the division's grasp. A task force was formed consisting of the troop's 3d Platoon and Troop Headquarters, a platoon of tanks, a platoon of engineers and a battalion of the 115th Infantry.

Late on the afternoon of the 18th, Task Force "C" (for Charlie) attacked St. Lô—the reconnaissance troop in the lead, with the tanks in close support. We reached the outskirts of the city before we encountered any real resistance. All along the way we had passed our own wounded, lying in the ditches. The infantry had been unable to evacuate them because of the intense enemy fire—but our orders were to stop for nothing until we had reached our objective.

As the column started up the long hill leading into the city, it came under strong small-arms fire from entrenched infantry at the top. There was nothing to do but go ahead and hope that they didn't have any anti-tank guns. Luckily, they did not, and the M-8's started to grind up the shell-pocked road to their destination. Half a dozen times we stopped and used our .50 caliber machine guns and 37's with devastating effect.

Many times since then we have been thankful that we had those .50 caliber machine guns mounted on the turrets of our M-8's. This was one of them. The Huns really hate those 50's!

Firing all the time, we gradually approached to within 20 yards of the main enemy positions at St. Lô. Then suddenly, the German resistance broke.

We entered the city proper. It was the most thoroughly devastated, ruined city that I have ever seen. As our armored cars pulled into the city square, the infantry came up behind us on either side of the street and proceeded with the always nerve-wracking job of ridding the ruined city of snipers.

It did not matter. We were in St. Lô! And the fact that the Jerries subjected us to a terrific artillery and mortar bombardment from their positions on the hills to the south did little to dampen our enthusiasm.

Reconnaissance with Third Army

The troop's first real chance at reconnaissance occurred 10 days later, shortly after the initial breakthrough by the Third Army. The objective was Vire, and the opposition came not so much from enemy personnel, but from their mines and roadblocks, which for the most part consisted of fallen trees at strategic points.

It was found that the best way to neutralize mines was to attach a long rope to the mine and pull it. About 30% were booby trapped and exploded when pulled. Generally speaking, Teller mines are fairly easy to detect, but the Germans have a habit of varying their technique, which makes taking things for granted a very dangerous proposition. For instance, Jerry's newest trick is to assume that the mine will be pulled and to attach an igniter that will detonate the mine 30 seconds after it leaves the ground.

In the initial stages of the Third Army's breakthrough, the Germans made extensive use of self-propelled guns to make up for their shortage of manpower. Inevitably, the Huns would have the level stretches of road covered with flat trajectory artillery. However, the extreme efficiency of our fighter-bombers —always prowling in front of the division route of advance—knocked out these guns as quickly as they were reported and turned what would have been a nightmare for the reconnaissance patrols into just that for the enemy.

In this phase of the campaign, it was found that the Germans seldom waited for the Americans to arrive. Time after time the 29th Reconnaissance Troop would reach a French village—the first Americans on the scene —only to be told by the overjoyed townspeople that the last Boche had left 8 hours before. The people threw flowers at us, climbed all over our vehicles, gave the men gifts of cognac, eggs and butter, and demonstrated their happiness with fervor for which the French have always been noted.

Consequently, the whole troop felt a tinge of regret when the 29th Division was pulled out of the action on August 16 and shortly thereafter started on the long trip down to the Brest Peninsula.

Storming Brest

The supply situation had become critical and the great Breton port of Brest had to be liberated to allow supplies to flow more freely to the mounting Allied armies and the needy French populace.

We had no idea, at the time, of the bloody battle that was shortly to be waged! Initially the Germans had very few troops in the city of Brest itself. Knowing that the city would be subject to intense aerial bombardment, the German commander, General Ramcke, had deployed his crack 2d Paratroop Division, supported by another infantry division and numerous marine and naval units, in a rough radius of 8 miles from the center of the city proper. It was only after several weeks of bitter fighting that they were driven back to an intricate series of concrete pillboxes, bunkers and forts which protected the city itself. Here they had to be dug out, burned out, or blasted out by the indomitable doughfeet. It was a bloody battle—Brest.

Troops of the 29th Division move through Vire, France.

The troop's initial assignment was a reconnaissance mission on the right flank of the division to determine enemy strength between the infantry units and the sea.

The troop soon found that the enemy was strongly entrenched in a series of massive forts along the rocky seashore. Originally these strongholds were designed for coastal defense, and they were considered invulnerable. We then battered them with what firepower we had, but all to no avail. Division then attached a forward observer to the troop and used the M-8's for communications back to artillery headquarters. The system worked out very well, but the 105's hardly chipped the concrete.

One reconnaissance platoon sergeant laid down his arms, walked up boldly to a Nazi fort and demanded that the Nazis surrender. The reply of the Nazi commander was that he would fight to the last man. The next day a battalion of Rangers stormed the garrison, and the Nazis changed their minds.

As the Americans drew closer to the city, the enemy's intensive use of artillery made vehicular movement impossible, so during the last week of the campaign the troop fought dismounted.

★Ed. Note: Comments from the officers and noncommissioned officers of this reconnaissance unit were printed in the November-December, 1944, Cavalry Journal under the caption, "Comments from Combat—Normandy, Brest, and the Present.—From 'Q' Cavalry Reconnaissance Troop (Mecz)."

29th Cavalry Reconnaissance Troop (MECZ)*

Signal Corps Photo

THIRD ARMY RECON

HOW a cavalry unit became the eyes and ears of the army commander is part of the saga of the U. S. Third Army and its spectacular dash across France. The unit was the 6th Cavalry Group (Mecz), commanded by Colonel Edward M. Fickett.

With armored divisions spearheading in several directions and other Third Army components literally scattered all over northern France, Lt. General George S. Patton, Jr., was able to maintain a complete and running picture of the progress and situation of all his major combat units.

On a directive from General Patton, the 6th Cavalry Group resolved itself into an Army Information Service. Normal signal communications and command channels were by-passed, and the information was obtained on the spot by patrols in the front lines, then relayed by radio and teletype to Third Army Headquarters. All means of communication were used.

Information—from Battalion to Army

The fundamental unit of strategic maneuver is the army. To control and direct the campaign, to allot major combat elements from corps to corps for the accomplishment of assigned missions, and to employ supporting and reserve troops effectively, *the army commander must have current and continuous information from the front line elements.*

A system that will bring this information with both speed and accuracy is a vital adjunct to a highly fluid and mobile campaign. In Sicily, where such reports were often late and inaccurate, it was found that it was necessary to know the location of all troops at all times.

In position warfare or in a more or less stable situation, normal signal communications are adequate. The battalion commander reports his position and progress in a fairly detailed form to regiment. After this infor-

mation is analyzed and sifted, it goes on to division G-2 and G-3. After further study and sifting there, it is sent to corps where it is drawn in on the overlay and incorporated in the periodic reports. Finally, army—usually 10 to 12 hours after battalion reported—gets the over-all picture.

Such a procedure has its points in a stable situation, but it will not do in a campaign of quick and sudden movement. In such warfare the army commander must know—and know at once—the position, situation and progress of every major element within his command.

No criticism is meant or implied of the normal system of signal communications or of such information passing through the chain of command. Delay is part and parcel of the system—but for an army with ambitions to go places fast, it simply will not do.

Origin and Training of AIS

While still in the United Kingdom, long before his Third Army became operational, General Patton foresaw the need for a fast and efficient system of information and in a directive to Colonel Fickett assigned him the responsibility of organizing and operating an Army Information Service.

The 6th Cavalry Group, comprising the 6th and 28th Cavalry Squadrons, both mechanized, commanded by Lt. Colonels Tom E. Matlock and Walter

←

Members of a cavalry unit with the XV Corps pass wreckage of German equipment near Luneville, France. When strong resistance was met in this sector the unit turned a captured German gun and ammunition on the Nazis.

NAISSANCE

E. Day, respectively, was to establish a channel, under Third Army control, to make and report front line G-2 and G-3 information direct to the Army advance command post. The Information Service was to utilize not more than one squadron; the remaining squadron was to be available for Army ground reconnaissance missions and for special Army tasks.

Colonel Fickett, with Major Thomas H. Stewart, III, Group S-3, immediately set to work to comply with the directive. A few days later a plan and a request for additional equipment, including communications items and vehicles, was submitted and approved, and an intensive training period was begun.

As originally planned, the Information Service was to monitor friendly battalion, regiment, division and reconnaissance units operating within the Third Army. After the initial stages of the campaign in France, however, the monitoring was dropped entirely as it

by Captain
*Robert Willoughby Williams**
As Told to
*1st Lieutenant Lyman C. Anderson***

proved to have little value. If, through static or other interference, the operator missed an important part or phrase of a message, he was not permitted to break into the radio net to clarify what he had missed.

The extreme flexibility of the Army Information Service, as conceived and set up by Colonel Fickett and Major Stewart, proved to be one of the greatest values of the system. Conditions of the campaign anticipated during the training stages were not always met in the field; on the other hand, problems never thought of arose. One such example was the daily shifting of corps and divisions. But the Army Information Service was molded to fill the current need, and it was done so well that at no time was General Patton or his staff ignorant of the disposition or situation confronting any of his major elements.

Organization of AIS

A troop commander and troop headquarters of the reconnaissance squadron were assigned to each corps, and a lieutenant and a reorganized platoon to each division. Personnel administration remained with the squadron headquarters employed on the mission. Tactical control over the entire AIS system was exercised by the group commander.

As initially planned, the detachments were not organized as standard reconnaissance platoons. Each detachment had two officers and provided a monitoring section and a command and patrol section. When the monitoring was dropped, the monitoring section was merely incorporated as part of the divisional AIS detachment. Later it was found that the detachment was too large and unwieldly, and that two officers, while working satisfactorily together, were a luxury but not a necessity. After a month of operation the divisional AIS detachment finally resolved into a normal reconnaissance platoon.

Another example of how the lightning campaign in France changed the original AIS setup was illustrated in the relaying of front-line information by radio. During the first stages of the operation, the division detachments reported by radio directly to 6th Cavalry Group Headquarters. This traffic became increasingly heavy and by the latter part of August the Group Headquarters was receiving messages from 16 divisional detachments. When it was found that Group could not handle such a large volume of traffic, the

*6th Cavalry Group.
**Public Relations Section, Twelfth Army Group.

situation became critical and on August 25 the radio setup was changed so that division detachments sent their messages to the troop commanders at corps levels.

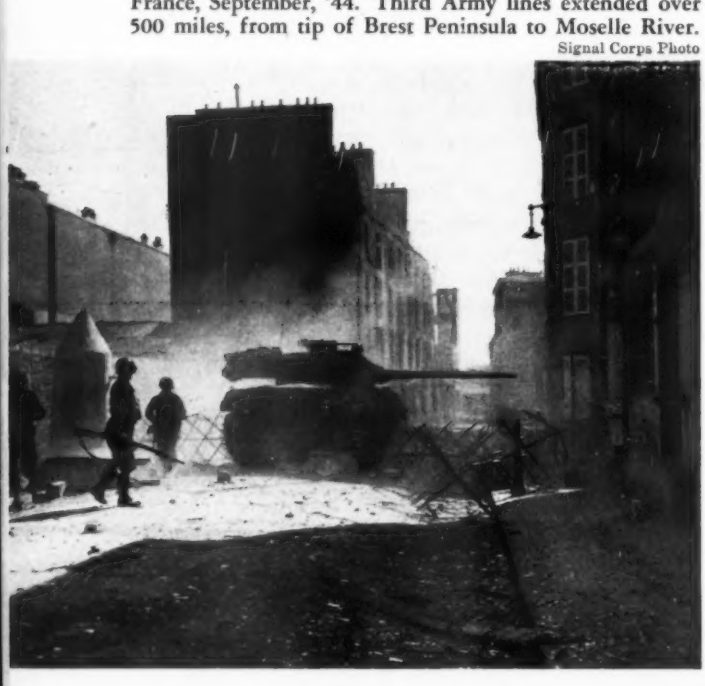
Here the troop commanders assembled the information and relayed it to Group HQ by radio. At the Group HQ the information was received, plotted, evaluated and sent to the AIS liaison section stationed at Army HQ, in close proximity to the operations section. From there the messages and information were distributed to G-2, G-3 and other concerned members of the Army Staff.

As it successfully worked out, one lieutenant and his reconnaissance platoon maintained constant contact with division G-2 and G-3, in addition to patrolling with forward elements, and obtaining and exchanging information with battalion and regimental S-2's and S-3's. A good part of the information obtained was from the patrols' own observations at battalion CP's and OP's and in the midst of actual engagements.

Operations

When a division planned to attack with two regiments, the platoon leader usually placed a patrol consisting of an armored car and one or two ¼-ton trucks with each regiment to follow the attack and report its progress to the lieutenant by radio and sometimes by messenger. Should only one regiment make the attack, the lieutenant might send a larger patrol to cover its front-line activity. Ordinarily, the patrols were commanded by NCO's, sometimes even by privates; in important instances, by the lieutenant himself.

A tank destroyer of the Third Army fires its 75mm gun point-blank at a Nazi pillbox emplacement in Brest, France, September, '44. Third Army lines extended over 500 miles, from tip of Brest Peninsula to Moselle River.
Signal Corps Photo



If these officers and men had not been extensively trained in tactics, movement and nomenclature of troops, military terms, and above all, *map reading*, they would have been hopelessly lost, and the system instead of being of inestimable value, could well have proved catastrophic. Important and far-reaching decisions were made on what Sergeant Richard Roe or Private John Doe saw or heard and reported. The service not only had to be fast, it HAD to be accurate.

These patrols often were involved in the fire fight. Although dog fights with the enemy were to be avoided, it often became necessary for the patrols to fight their way from one point to another.

During the sweep through France, the communications problem was a nightmare, but in one way or another the information was obtained and relayed to Army. Never during the drive from Avranches to Chalons sur Marne was the Third Army CP in one place for more than 5 days. At one time, during the latter part of August, the VIII Corps was in Brittany fighting for Brest and containing enemy forces in Lorient and St. Nazaire, while at the same time it was conducting seiges of St. Malo and Dinard. Meanwhile, other corps of the Army were actively engaged along the Moselle River, from Thionville south to include Nancy. The total distance between VIII Corps elements at Brest and the forward elements of the remainder of the Third Army along the Moselle measured the breadth of France, yet Army Headquarters relied on AIS for information of all elements in the fight.

Communications

To make communications possible between such distant areas as Brest and the Moselle River with the limited radio equipment available, the ingenuity and the ability of all personnel was strained to the utmost.

One important item, the radio personnel were all selected men, picked for their jobs because they generally had 3 to 4 years of radio experience.

Twenty-two of these men had been sent to a training school for a short course in communications. There they learned how to lay wire and operate and maintain switchboards and teleprinters.

Pigeons were also used during the latter period of AIS operations. Conditions were stable at the time and about 40 birds a day were used, or about 740 in a three-week period. This method of communication was fairly successful in a static situation; the losses of messages for the entire time amounted to only 3.06 per cent. Pigeons were of value to distant patrols when the radio blanked out or when radio messages could not be sent.

Messenger and courier service proved to be of great value in keeping communications open during the breakthrough. At this period solo motorcycles were found to be better adapted for this work than ¼-ton trucks. But when the cold, wet weather set in, the going

by motorcycle became extremely precarious and their use was limited.

A Study for Leavenworth

How the AIS came to the rescue in many totally unexpected situations during the highly mobile campaign in August is illustrated by the following account. The action involved the XV Corps, commanded by Major General Wade Haislip, in which an enemy infantry division was all but wiped out.

When the XV Corps was advancing through the Neufchateau region on the south flank of the Allied forces in the west, it encountered one of the strangest situations of the war. The German 16th Infantry Division had been brought from the Bay of Biscay area northeast to halt the advance of elements of the U.S. Third Army, advancing rapidly toward Epinal. The enemy division took up positions on a general southwest-northeast line between Neufchateau and Epinal.

In its rapid advance the XV Corps passed the U.S. 79th Infantry Division along the northernmost of the two main highways between the two cities and the French 2d Armored Division along the southern route, which generally paralleled the other. The average distance between these two roads was approximately 5 miles. In the process of this advance the entire German 16th Division was by-passed in front and rear by the Allied columns. Only when forward elements were within approximately 10 miles of Epinal did the XV Corps realize that the German division was sandwiched between the columns.

General Haislip promptly faced the 79th Division to the south and the French 2d Armored Division to the north, attacked vigorously and proceeded to annihilate almost to a man the trapped German division. The engagement occurred when other elements of the Third Army were already along the Moselle River.

The constant reporting of locations and dispositions of elements of the XV Corps by the AIS in great measure made this maneuver possible.

Conclusion

After the system had been in effect for about a month and a half, the reporting by AIS of intelligence information was abandoned. It was found that corps G-2 could better handle this information, and after its evaluation there, it passed directly to Army G-2. A heavy burden was here lifted from the shoulders of the AIS.

The Army Information Service had accomplished its highly important mission during the fluid stages of the campaign. When the front became relatively stable during the Battle of the Moselle, and later after the fall of Metz, the AIS was suspended.

While it is acknowledged that the use of the 6th Cavalry Group for such a purpose was relatively an expensive employment of combat troops, it is felt that it was more than justified during the period of highly mobile operations. It is difficult to conceive how the Third Army could have made its sweep after the breakthrough at Avranches had not the AIS been functioning.

In retrospect, it can be said that the officers and men of the 6th Cavalry Group really completed their tactical education during the AIS operations. All of them, through their close proximity to the various components and subordinate units of an army, have a clearer picture of the absolute inter-dependence of corps, divisions and even battalions.

Whether or not the AIS will ever be resumed again —after four and one half months' operation—is, of course, not known. In future wars and campaigns provisions should and probably will be made for a service similar to the AIS, but during the Battle of France General Patton had to improvise with the tools at his disposal.

Third Army in Luxembourg
January, 1945

Paris, Jan. 21 (AP).—The United States Third Army was overrunning northern Luxembourg tonight, crumpling the once-powerful south flank of the Germans' "Belgian bulge" with gains of nearly 5 miles and smashing with big guns at the enemy now racing for the haven of the Siegfried Line.

Pacing Allied armies that are attacking along most of the 200-mile Western Front, Lt. General George S. Patton's forces struck from the west and south, bursting into the mountain-bound little duchy from Belgium and fighting to within a mile of one main enemy escape road.

The sweep from the west drove the Germans out of Belgium at a point southeast of Houffalize, and carried a third of the way across Luxembourg's 12-mile-wide northern tip into the village of Lullance, threatening to outflank any enemy positions anchored on Wiltz, 6 miles south.

As he poured tanks and infantry into this 3-mile front, General Patton loosed another drive in the southeast that deepened the Sure River bridgehead to 4 miles and overran Landscheid, a mile south of one main east-west escape route.

The Germans were rushing troops out of their imperiled Ardennes positions over this highway into Vianden, crossroads town at the Reich border, in a storm of American artillery fire.

A dozen or so Belgian and Luxembourg towns fell to the Third Army, most of them to the 6th and 11th Armored Divisions.

The 6th Cavalry Group swung into action on the south flank of these forces and crossed the Wiltz River a mile west of the town of Wiltz, enemy mountain stronghold.

Nowhere did the Germans hold positions more than 10 miles west of the Siegfried Line along the axis of their deepest penetration, which had carried almost 45 miles west toward the Meuse.

Comments

Berg, France—A Recon Troop in Dismounted Action

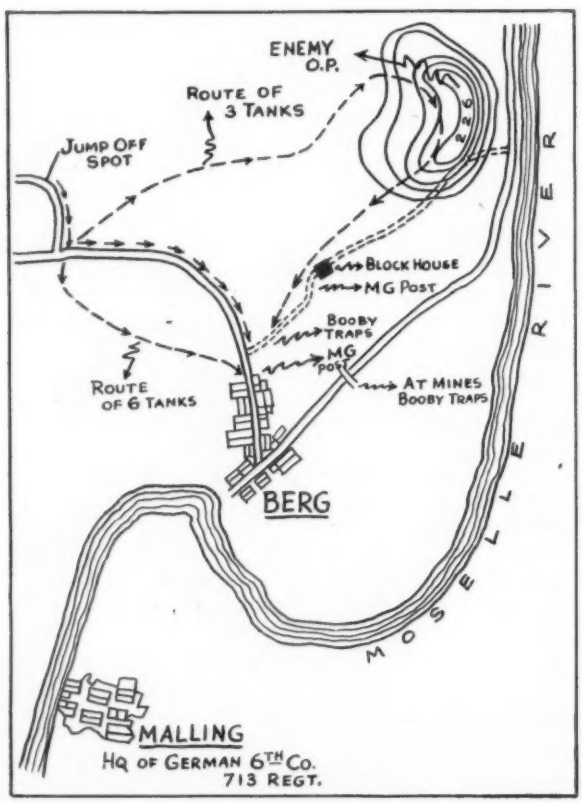
by Captain Richard B. Stolze, Reconnaissance Troop Commander

OPERATIONS for the attack on Berg were carefully planned.

Located comfortably on a high hill, the town furnished remarkable observation over the entire surrounding area (see map). Jerry in command of hill "226" made operations even more difficult. At any event, orders were to bag the town.

It was estimated that there were between 30 and 40 Germans in Berg, and the proposed plan was for the 3d Platoon, dismounted, to advance through existing road mines up the main road, with a platoon of engineers following to clear the road of mines. The 2d Platoon, also dismounted, was to seize the blockhouse, which was expected to be a machine-gun position, and then continue into the town from that direction. The 1st Platoon, mounted in its vehicles was to follow on "clear-ahead" from the engineers. The troops were to move up under cover of darkness; then after a half-hour artillery barrage, were to advance into the town.

The first phase of the plan was carried out smoothly until an engineer accidentally set off a booby trap. Thus alerted, Jerry immediately opened up with well placed machine-gun fire which kept the platoon pinned down and prevented its advance.



Although not yet time for the attack, the platoon signified its readiness for assault, and called for artillery fire. As the barrage opened, the platoon pushed forward, until Jerry opened up with mortar and machine-gun fire and again halted the advance. As dawn broke, enemy fire became more effective, and the platoon finally had to withdraw.

Two tank platoons, held near by in mobile reserve, were then called to spearhead the advance.

The tanks advanced in single file until the first one struck a triple Teller bar mine and blew up, and immediately the remaining tanks withdrew to make a different approach.

Captain DuPree of the tank company and I went into a huddle and mapped out a new plan of attack. He was to get 6 tanks into the town by moving cross-country from the west. After knocking off the enemy machine guns, the tanks were then to outpost that end of the town. Meanwhile three other tanks were assigned to clean out hill 226 and neutralize Jerry's fire from there. Thus covered, the dismounted recon troop was to follow into the town from the road route.

The new plan ironed out smoothly. The tankers got their 6 tanks into the town, knocked out the machine gun outpost on the approach side, and allowed the dismounted troops to move up. Their advance was slowed considerably by heavy mortar fire and a great many booby traps, but the troop pushed ahead. The tanks, however, were a little too fast for the men on foot, and the first unit did not get in as soon as had been planned. The 2d Platoon was the first to reach the town with its dismounted men. Meanwhile, the tanks continued outposting and shooting up anything they could see—neutralizing and pinning down enemy fire while the dismounted forces moved in.

The 2d Platoon immediately set up an outpost on the approach edge of town, and then dispatched 5 men hurriedly to the far end to set up another outpost in order to trap any escaping Germans. The balance of the 2d Platoon, plus the 3d Platoon, proceeded with an extensive house-to-house cleanup.

Although the operation continued to function fairly smoothly, casualties began to mount, and it became imperative that more men be brought in immediately. With mines still impeding progress on the road, the 1st Platoon vehicles were rerouted to approach the town over the cross-country route taken earlier by the

tanks. A small detail of engineers was then left to work on the roads, while the balance of the engineer platoon was called into town to hurry operations in the house-to-house fighting.

During the entire operation the combination of artillery, tanks, and dismounted cavalrymen worked in perfect tactical coördination to accomplish their mission.

Conclusions

The complete action at Berg, from the start of the attack by the tanks until the town was cleaned up, covered about two hours. Total results netted 24 German prisoners and 8 killed. The troop's casualties, mostly from booby traps and mortar shrapnel, were 4 killed and 15 injured. Most injuries were not serious, as the majority of those wounded were disabled for only two to three weeks.

Throughout the attack it was of utmost importance that platoon leaders and noncommissioned officers physically lead their men, with the platoon leader leading and a high ranking N.C.O. bringing up the rear. Men will follow if they are led. The job to be done should not be left up to a few men, and the platoon leader and the N.C.O. must see to it that every man does his part. The men will do anything, but they must receive orders. If they are not told what is to be accomplished, the tendency will be toward disorganization rather than toward an organized assault. This difficulty became very apparent during the attack on Berg. Fortunately, however, enough officers and N.C.O.'s were made available in time to reorganize disorganized groups which had started to "sag in the middle" by the loss of ranking N.C.O.'s.

Mechanized cavalrymen should be trained thoroughly in dismounted action as well as in their more normal rôle of mounted action. As the attack on Germany continues, it is apparent that more and more dismounted action will be necessary.

In an operation of this nature, the best weapons are tommy guns, grease guns (M-3 submachine gun), M-1 rifles, carbines, and plenty of hand grenades.

The 509 radio (dismounted 510) is an excellent radio and the best that the cavalry can employ in the present TO/E. One for each platoon in dismounted action is sufficient. Two men, however, are required to man and carry this radio. It is also imperative that communications be continuous at all times, at all cost, especially during the attacking period. If possible, an established competent man should be assigned to assist with the radio so that if the radio operator is actively engaged elsewhere, the alleged competent radio assistant can give a high light description of the action as it progresses. An absolute necessity is that an officer or N.C.O., if possible, be close to the radio at all times.

It is believed that the attack on Berg would not have been possible without the employment of the tanks which knocked out the hostile machine-gun outposts that were pinning down the dismounted cavalrymen. The tanks also kept Jerry busy ducking their continuous machine-gun and 37mm fire, while a clearing was made for the house-to-house cleaning.

Berg, France—A Tank Company in Support

by Captain Donald J. DuPree, Company Tank Commander

THE taking of Berg was generally considered as General Patton's last military objective on the west side of the Moselle River, and the mission was given to Company "F" tanks, and Troop "B," of the Reconnaissance Squadron, dismounted.

The commanding ground to the left of Berg had been taken once by a platoon of Troop "A," which later had been forced to withdraw, and the ground retaken by the enemy.

The attacking schedule, set for 5 November, 0600, was to be preceded by a 10-minute barrage on the enemy towns adjoining Berg and a 155mm barrage on the town itself.

Troop "B" moved in at 0600 with an attached platoon of engineers. At 0730 the commander reported that the troop had been pinned to the ground by heavy enemy fire—small arms, mortar and artillery—and could not advance.

It was then that the two tank platoon's and headquarters section of Company "F" were committed to make a breakthrough and get into the town. The tanks moved out with the 1st Platoon to the front, the company commander in the middle, and the 2d Platoon in the rear—more in a column and well dispersed for purposes of immediate control and deployment by the company commander.

The leading tank, assigned to proceed as far as it could while locating any possible antitank guns or mine fields, struck a triple Teller bar mine, which totally destroyed the undercarriage. Three men were wounded.

This casualty, however, enabled the balance of the attacking forces effectively to by-pass this mine field by going cross-country. For deceptive purposes, the

Signal Corps Photo

Tanks advance on Berg, France, December 1944. Approaches to Berg were heavily mined, and the Germans, occupying the high ground overlooking the town, held excellent gun positions from which to direct fire on aproaching troops.

enemy had employed dummy mines in the field adjoining the road.

Against a rain of heavy mortar and small-arms fire the first tank entered the town of Berg at 0800.

The 1st Platoon, used in echelon form as a flanking movement around the mine field, was well dispersed to flank the town and reduce any small-arms fire on the dismounted men. The 2d Platoon on the left flank covered the enemy-held high ground with 37mm HE and machine-gun fire. The action of the 2d Platoon in covering this hill served to reduce the amount of mortar fire by harassing their forward observers. Once the town was entered and secured by the two tank platoons, the dismounted cavalrymen moved forward, encircled, chased, and captured the enemy and in general, conducted mopping up operations.

After taking and handcuffing Berg, it was necessary to detach the 2d Platoon which, with the aid of the dismounted cavalrymen, attacked the high ground coming into the town and successfully drove the enemy from their position.

Two platoon's were then detached from Troop "A" to dig in and hold that high ground—the key terrain to the entire section—and deny Jerry his commanding observation posts.

Conclusions

The surrounding terrain was muddy, with plowed fields adjacent to the roads. Hostile observation remained on three sides of the town. For a time the enemy had been in full possession of the hill and high ground which afforded the commanding observation. This had allowed Jerry excellent gun positions for directing effective fire. Throughout the entire mission, enemy fire—artillery, mortar and small arms—was constant. Visibility and atmospheric conditions were good. Morale was excellent; estimated enemy morale was fair.

Most of the tank casualties were incurred as a result of individual crew members exposing themselves for too long a period in the open turret.

Radio control is a prime necessity and definitely should not be conducted on squadron command channels because of undue traffic which interferes in the employment of the vehicles. Loss or partial disruption of communications reduces maneuverability, especially in small, flexible units.

Inasmuch as cavalrymen have been called upon to do doughboy teamworking, it is certain that combat training should take in the basic fundamentals of all branches of the combat arms—at any event, as much as possible—infantry, cavalry, artillery (fire control from forward positions), etc. Thus the enemy can more easily be outwitted, lives will be saved, and victory will be the dividends.

Another noteworthy fact for anyone's thinking cap is the necessity of inspiring soldiers with the same confidence when they are dismounted that is so noticeable when they are in their vehicles. The more a soldier learns to master his wits without the roof of armor about him, the more effective and producing he will be. Confidence—courage to withstand the rigors of combat under dismounted conditions—makes for cool thinking, assured teamwork, and eventual success in the field.

Time in the Jungles

by 2d Lieutenant Ross S. Hadfield★

"LIEUTENANT, the Exec. wants to see you."

With this salutation from one of his men, the platoon leader received his first inkling that something

★81st Cavalry Reconnaissance Troop (Mecz).

was up. He checked his watch and noted that it was 1620—rather late in the afternoon for much preparation as it would be dark by 1830. The platoon had previously been sent on late afternoon patrols, which normally should have required 4 to 6 hours of daylight to perform; so with apprehension the lieutenant looked up the executive officer of his troop.

The orders the executive officer gave him were, "Get your platoon ready to move out. Take 5 machine guns; use 3 of headquarters guns and one unit of fire."

"Where are we going and what are we to do?" asked the platoon leader.

"The captain will give you the dope when he gets back from G-2," the executive officer replied.

With that warning the platoon leader started preparing his platoon to move. The members of the platoon were already in a state of confusion, as they were trying to build shelters to keep their equipment and supplies dry, and so that they, themselves, could get dry after 4 days of continual rain. Some of the men were out in the jungles locating logs for building purposes and had to be called in. The others, under their squad leaders, began getting the platoon's equipment lined up.

About 1635 the troop CO returned, and the platoon leader immediately checked in with him.

The bits of vital information which the platoon leader received in the next 15 minutes were:

1. Where he was to go (approximately).
2. What he was going out to get.
3. What supplies he was to take.
4. What time he was supposed to be there.

Things which were not given him, even after asking, were:

1. The enemy situation.
2. Where friendly forces were located.
3. What units comprised those forces.
4. Any information of the terrain other than the issue map, made from aerial photos.

The platoon was assigned Section Z of the island (see map) to outpost against sea invasion. It was to establish a central CP and 4 outposts, as shown on adjoining map. Each OP was to be equipped with the following:

One LMG.

One unit of fire.

One sound power telephone for communication with CP.

The CP was to have:

One EE8 type telephone to Central Defense Control.

One SCR 510 radio for communication to Central Defense Control.

One SCR 284 radio for communication with troop.

Three SCR 300 radios to be placed by the platoon leader.

The platoon was to use ¼-tons for transportation as far as possible and be in position by 1700.

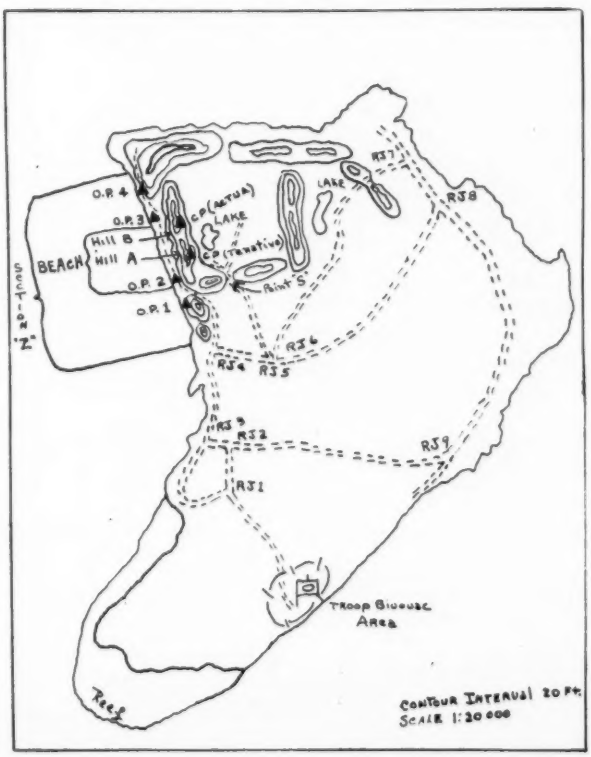
Asked about the enemy situation, the captain could not tell the platoon leader any more than what had been rumored around for several days: The doughboys had some of the Japs holed up in caves (exact location unknown), but snipers were still present in the area. The CO could not tell the platoon leader where the friendly forces were located or exactly what units were on the front lines.

By the time the CO finished issuing the orders, it was 1650. Another 15 minutes were required to get the extra equipment which the CO had ordered to go with the platoon and in checking to see that it was in order. Another 5 minutes passed while waiting for the return of two of the three ¼-tons which the platoon had available.

The platoon was to be in position by 1700, but with a warning order given at 1620 and final orders at 1650, it was an impossible task.

The platoon leader moved his platoon as a unit to RJ No. 4 (see map), where he turned over to the platoon sergeant 8 men, two machine guns, and one SCR 300 radio to set up OP's No. 1 and No. 2. The platoon leader instructed the sergeant to set up the OP's and, if it was not then too late, to join him on Hill "A." He then moved the rest of his platoon around toward the lake by RJ No. 5 with the intention of establishing his CP and, if possible before dark, to push on with his other two OP's.

At point "S" the platoon leader contacted the infantry and found that he could not get up to Hill "A" from that side because of a deep ravine which did not show on the map. In attempting to scale the rock cliffs on



the east side of the ridge, the patrol would be exposed to fire from Jap forces holed up in the area northwest of the lake.

After getting as complete a picture of the situation as possible from the infantry, the platoon leader immediately moved his platoon back to RJ No. 4, then north along the trail as far as a ¼-ton could go. Contacting OP No. 1, he found that the platoon sergeant had pushed on to set up OP No. 2. The platoon leader then moved on north along a dim trail which ran along the coast but was not shown on the map.

By the time that the patrol reached the vicinity where OP No. 2 was supposed to be established, it was quite dark, so the platoon leader decided to hole up for the night. The gravest concern in moving at night was in being fired on by friendly troops, who had already experienced being grenaded by the Japs after challenging. As a result, most troops holed up at dark and fired at anything that moved. Because of the thick jungle and rugged terrain the platoon leader and the men with him failed to contact the platoon sergeant. (Next morning it was found that they were less than 50 yards apart.)

The second day, after a personal reconnaissance by the platoon leader, the patrol set up the CP on Hill "B," because it offered better facilities for a CP than Hill "A." OP's No. 3 and No. 4 were established, and the platoon supplies were all hand carried in and wire strung to all OP's by 1500, when the platoon leader gave orders for all men to prepare their defenses for the night and clean their weapons.

The third day the platoon repaired the wire which was continually being shorted or broken by the infantry, who were packing supplies to their units, or cut by Jap snipers. The wire was placed up in the trees —the men working in pairs or more as protection against snipers. By 1300 communications were established to CDC and all outposts, and the platoon was relieved by another platoon from the troop.

Conclusions

Although the platoon had orders to establish an OP system by 1700 on the first day, it was not really set up until the morning of the third day—about 42 hours late.

Who was responsible for the delay?

With a little more experience the platoon could have set up the system faster. On the other hand, the platoon leader did not receive a warning or orders early enough on the first day to make use of daylight. He did not have time to make a personal reconnaissance, so he could not tell his platoon how or where they would move. He did not get the complete enemy and friendly situation. In fact, he had only rumored information until he found out for himself.

The troop CO did not get his orders from G-2 until late in the afternoon, and then he never received complete enemy and friendly information so that he could pass it on.

If an outpost is to be established in jungle terrain, at least double the normal time is required if there is any movement by foot because of the difficulties of orientation, the heat, and the hardships of hand-carrying all supplies through the jungles.

Orders should be handed down from the top as fast as possible in order to allow the patrol itself the daylight hours in which to work.

* * *

Coöperation With the Infantry

by Captain M. M. Cutler★

CLOSE coöperation with infantry is the keynote of all arms, and this fact has never been more noteworthy than in actions involving infantry and cavalry, specifically, the division reconnaissance troop.

Coöperation can best be accomplished on the battlefield when personal contacts have been made prior to battle. Not only should the reconnaissance troop commander know the regimental commanders and their staffs but he should also know the battalion commanders and staffs as well. The best place for making these acquaintances is back in the states, but if it was neglected there, acquaintances should be made as soon as possible wherever the units are.

In a rapidly moving situation, when the infantry cannot maintain contact with the enemy, the reconnaissance troop, logically, can best perform this mission. By riding 8 or 10 infantrymen "pig-a-back," a reconnaissance platoon gives to the following infantry, first hand information whenever it is stopped temporarily by enemy action. By the same token, no time is lost by the infantry main body in becoming disposed for action, because the mounted point has the situation "diagnosed," and reduction of the enemy interference is materially quickened. Usually, the fire power of the reconnaissance platoon is sufficient to reduce local resistence and handling of prisoners by two of the infantrymen allows the platoon to proceed without delay.

In situations of close contact between our infantry and the enemy, the reconnaissance troop is squeezed to a flank for the purpose of maintaining contact with the adjacent unit. In keeping this contact, it has been found desirable to leave an armored car with radio at the battalion headquarters of each flank unit. The purpose is twofold:

1. Platoons operating patrols can readily keep up with moving flanks and thereby never lose contact.

2. Adjacent unit commanders always desire information of the other units situation and position, and there, close at hand, is a continuous source of information.

Coöperation cannot be overstressed. Passing of information both friendly and enemy, to commanders, dispels the fog of the unknown and makes it possible to keep the enemy continuously off balance.

★Commander, Reconnaissance Troop.

Mountain Goat, M-4

by Lieutenant Richard K. Gottschall

1st Armored Division from Grossetto to Volterra, Italy, June 21 to July 10, 1944

THE 70 road-mile attack of the 1st Armored Division from Grossetto to Volterra, Italy, in June and July, 1944, was over the most unsuitable tank country that the division had encountered. Yet the operation was as successful as any in which the division had participated because unit commanders, the staff and the ordinary soldier all adapted themselves and their weapons to the situation.

The terrain was mountainous, laced by streams and deep gorges. The roads, what few there were, were built into the sides of the hills like nightmare shelves. Every mile had its quota of bridges and culverts, which the Germans consistently demolished. The roads twisted as every Italian mountain trail does, and each curve, with its blown bridge or culvert, became an excellent site for a roadblock. Armor is not designed to operate over such terrain, but it did.

The sector of the Fifth Army front assigned to the 1st Armored Division began with the coastal mountains and extended approximately 30 miles inland. On the armor's left an infantry division was attacking up the coastal plain, and on its right elements of the French Expeditionary Corps were attacking through the mountains.

The 1st Armored Division, with enough attachments to make its strength that of an embryo corps, was faced with the problem of covering a 30-mile sector which lacked enough roads and which had no terrain away from the roads that permitted the textbook employment of armor.

Ten Task Forces

The only solution was to cover every available road with a small task force. The sector was divided between the combat commands, each of which operated with three small task forces, but almost as soon as the attack was opened, it was found necessary to commit the division reserve in the center to cover the large gap between the combat commands. Using the staff of the 13th Armored Regiment, this group operated with two small forces and was called Task Force Howze. To protect the flanks of the division, and to keep contact with the adjacent units, reconnaissance battalions operated on the east and west boundaries. Although their mission implied a more or less passive rôle, their activities might be considered as those of a ninth and tenth task force since the neighboring divisions often lagged miles behind.

The task forces varied in composition, both between and within the combat commands. On the left of the division sector, Combat Command B placed a mobile force of a light tank battalion, an armored infantry company and a medium tank company. The center CC "B" force included a medium tank battalion, an armored infantry battalion and a reconnaissance company. On the right CC "B" placed a battalion of armored infantry, a company of light tanks and a platoon of medium tanks.

The reasons for the variation were the superior roads generally available to the center force and the concentration of German armor in the center of the sector. The right and left forces were weaker but more mobile for the same reasons. Common to all three forces, however, were engineers, tank destroyers and reconnaissance elements. A platoon of each was usually assigned to each task force.

In the division center and right, the formations of Task Force Howze and Combat Command A remained generally the same throughout the operation. Enemy armor did not constitute the threat to these groups that it did on the left.

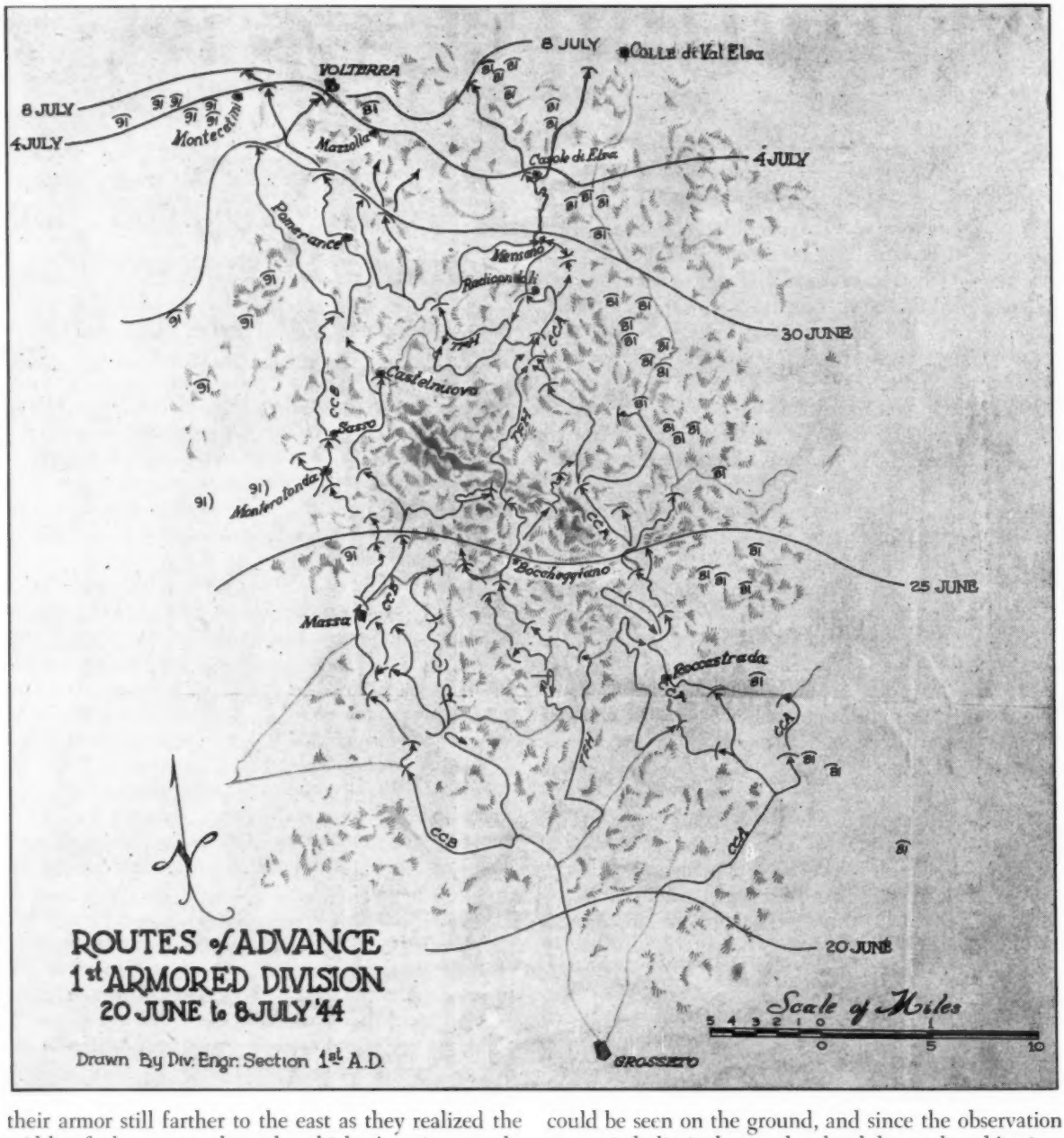
Common to the forces of Task Force Howze and CC "A" were a medium tank company, an infantry company, a reconnaissance platoon, a light tank platoon, an engineer platoon and a tank destroyer platoon.

After the first few days of the attack there was no appreciable division reserve. The nature of the terrain, the width of the sector and the necessity for meeting a thinly spread but solid German defense forced the division into what amounted to a skirmish line.

The Opposition

The Germans probably expected the Fifth Army to employ the 1st Armored Division on the broad coastal plain in an attack aimed at the flank of the German position. The terrain was generally more suitable and the quick capture of seaports was a prize worth considering.

The Germans evidently concentrated their armor to meet such a threat, and were forced to shift it quickly to the east when 1st Armored tanks made their appearance in the coastal mountains. Combat Command B, on the division left, took the brunt of the armored defense at first, but the Germans were forced to shift



their armor still farther to the east as they realized the width of the sector through which American tanks were operating.

For defense against the 1st Armored attack, the Germans employed a battalion of Mark IV tanks and a battalion of about 50 Mark VI (Tiger) tanks. The German 162nd Infantry Division was the main force in the sector, and was reinforced with self-propelled guns.

It also developed early in the attack that the available maps were not satisfactory. Aerial photographs showed better the conditions of small trails and a few of the demolitions. These photographs were used extensively throughout the operation.

No planning was possible any farther ahead than could be seen on the ground, and since the observation was strictly limited, none but local day to day objectives could be chosen. An over-all mission was assigned, of course, but throughout the attack many decisions were perforce left to unit commanders. The best available observation came from the small artillery planes, which were flown almost continuously.

Small engagements were fought repeatedly on the division's routes, but for the most part these skirmishes were simply the orthodox reduction of strong points and roadblocks.

"Impassable Terrain"

The most glaring error the Germans made in their defense was their reliance on apparently impassable

terrain for flank protection. Repeatedly they left a flank unguarded only to discover too late that a company of M-4's was sitting on the "impassable terrain" and shooting up their position.

According to intelligence reports, midway in the operation, the German 162d Division advised subordinate units that since the "opposing armor" was using trails generally considered impassable to tanks, bazooka teams were to be placed to guard all trails, regardless of their condition, which led into or past German positions.

In the capture of Roccastrada, heavily mined hill town in the CC "A" sector, a task force was sent up Highway 73, a two-lane road that confined the column rigidly to a march formation. The small German garrison in the town had no difficulty stopping the armored force, which could employ only a tank or two at a time. However, the CC "A" commander quickly sent a second task force around to the left. A faint trail, which showed on the aerial photographs, led north past Roccastrada and intersected Highway 73 again above the town.

The trail was so narrow, rocky, steep and twisted that the Germans had not even bothered to mine it. The route would have been difficult even for a mule, but the tanks managed to worry their way through and came into Roccastrada from the north and east. The Germans, failing to discover the threat to their flank until the tanks were within range, were forced to evacuate their position with heavy casualties.

On the west, CC "B" had left Route 1 and turned north into the mountains on the road to Massa, chosen as a main axis. Two thousand yards north of the highway, the force had to pass through a narrow saddle. On the far side of the saddle, distributed across a small plain, nine Tiger tanks waited. As the column of CC "B" tanks crossed the rise, the Tigers struck. Although several of the Tigers were destroyed, the Germans retained control of the position.

A force was then sent 10 miles back over Route 1 and around to the right. This force, which was given the mission of making a demonstration northeast of the saddle to relieve pressure on the main column, met few demolitions or mines and only slight resistance until the tanks rolled into position. Then six Tiger and four Mark IV tanks attacked from four directions, and knocked out four M-10's and 12 light tanks. The remaining platoon of light tanks hastily withdrew to a roadblock which the infantry company had organized 2,500 yards to the rear. The German position guarding the saddle had been only slightly affected.

Since a frontal assault was still out of the question, the only alternative open to the CC "B" commander was a flanking maneuver to the left. The photographs showed only a faint trail. It was not a route for armor, but a reconnaissance company, reinforced by a platoon of tank destroyers, was sent over it. Again the Germans had relied on the terrain to protect their flank, and the force, reaching the hills to the left of the saddle, cut the road above by fire.

By morning the reconnaissance group, reinforced by an armored infantry company and a medium tank company, had weakened the German position enough to force a withdrawal.

Artillery in Antitank Rôle

These Mark VI tanks, which repeatedly appeared in the CC "B" sector, were the most serious threat to the division's advance.

The terrain, as has been pointed out, was perfect for roadblocks, which effectively neutralized the 1st Armored Division's numerical superiority by limiting the use of tanks to only the first one or two M-4's in each column.

The bulk of the attached heavy artillery was concentrated in the CC "B" sector. A 155mm howitzer battalion and a 155mm gun battalion were used primarily as indirect fire antitank guns. Every time a Mark VI was discovered on the combat command's route, which was often, the fire of the two attached battalions, and of the organic 105mm battalion, was poured on the tank. It was expensive warfare in regard to ammunition, but it was the only method of destroying the Tiger tank without heavy loss of personnel and equipment.

The method and skill of the German tankers were illustrated shortly after the incident of the "saddle." The reconnaissance elements of the task force on the left passed through a defile into an open area formed by a small river. They investigated the area on foot but discovered no enemy and returned through the defile for their vehicles.

As they prepared to mount, an artillery cub plane buzzed the column and dropped a note. The observer had detected three Mark VI tanks in the open area. They had been so well camouflaged that he had not seen them until they had removed part of the disguise to give them better vision and a field of fire. The artillery destroyed two of the tanks.

Farther north in the attack toward Massa the left column of CC "B" employed the main axis. Of the other two task forces, the right hand column five miles inland had the customary mountain road, but the center column was forced to split into two small forces. One of these was sent over an unimproved, narrow road, while the other, setting off across gullies and streams, made its trail as it went.

The pressure of the four columns, plus the activities of the reconnaissance battalion on the left flank, forced the German garrison to withdraw from Massa. With five forces coming at and past their position, the Germans were unable to fight for the town because of the impending threats to their flanks and rear. They evidently did not have enough troops and armor to defend all five approaches, or enough time to dispose what strength they had.

Tanks Without Infantry

The vulnerability of even Tiger tanks without infantry was illustrated in the Task Force Howze sector during the same period. At Bocchegianno, TFH completely wiped out a German infantry company which had occupied the town. Sixty were captured and the remainder of the company killed.

A few miles farther north, where the narrow shelf road curved sharply to the right to enter a deep gorge, foot reconnaissance discovered two Mark VI tanks. Even though the task force had made no attempt to be quiet in its advance up the road, it was able to occupy a wooded slope above the road with an infantry platoon and fire a round of bazooka at the lead tank before being discovered.

Small-arms fire kept the German armor buttoned up, and a tank destroyer was able to knock out the lead tank. The second retreated and was later found several miles north where it had broken down from a damaged suspension. Throughout the fight, neither German tank was able to fire a shot, either from their 88mm guns or from their machine guns.

The two tanks had posted no lookouts to warn them of the TFH column's advance. They had obviously relied on the Bocchegianno force to fight a delaying action to their position. If even one German had escaped, the tanks would have been warned. Instead, the TFH column approached with complete surprise.

At Bocchegianno, the German infantry had no antitank protection and were no match for the TFH combination of tanks, infantry and artillery. Above Bocchegianno, the German tanks were no match for the column because they were forced to fight without infantry.

Between Massa and Castelnuovo in the CC "B" sector and extending east in a belt across the division sector was a higher range of mountains which limited even more the use of armor. In many cases the demolitions could not be bridged by the engineers under combat conditions and the division's tanks were confined to a very few routes. The infantry had to be dismounted from their halftracks or from the backs of tanks for long periods. Bridgeheads over the demolitions the engineers could repair were fought for bitterly by the retreating Germans.

Ten Miles On Foot

At Massa, CC "B" discovered that the area its left column must cover not only had no roads for the next ten miles but had no passable trails. The hills were occupied and could not be passed by the main column of armor until they had been cleaned out. The threat to the left flank was serious.

The armored infantry was dismounted and proceeded northwest from Massa. Luck and the ability to move fast and aggressively enabled the infantry battalion to surprise a battery of horsedrawn artillery, and capture 45 personnel, the guns and a number of horses. The battalion had been forced to leave even its quarter-ton trucks behind, so had it not been for the captured horses, the column could not have been supplied until it reached Monterotondo about 8 miles north. A western peep driver became the battalion blacksmith during the four-day fight.

In the fight from Monterotondo to Sasso 3,000 yards to the north on June 28 the battalion completely exhausted itself. The sector formed a bottleneck for the CC "B" forces and allowed the Germans to concentrate their defenses in the area. The town could not have been held without armor, but there were no roads or trails, so a force of tanks was sent across the "impassable terrain." Making its own roads, it passed to the left of one 600-meter peak and arrived in Sasso in time.

The Cecina River

Once the high range was passed, the advance was "downhill" to the Cecina River defenses of the Germans. The attack moved rapidly, and by dark on June 30, CC "B" and TFH had established bridgeheads on the north bank of the river. Radicondoli had fallen and Mensano was occupied by CC "A," which had passed to the east of the Cecina River valley. In the 10-mile run of the CC "B" left column on June 30 the troops had again alternated between mule trails and no roads at all to get their tanks to the river.

The advance on the left and center of the 1st Armored Division sector was so rapid that many Germans were trapped and captured before they could prepare their defenses. That night there were still untouched German positions on the south side of the river between the attacking armored columns.

One of the CC "B" columns crossed the river and took up positions straddling Highway 68, key lateral route connecting Volterra and Route 2 with the coast. After dark three Mark IV tanks came east on the highway and reached the outskirts of the American position before they were discovered. A tank destroyer, pumping three-inch AP at the exhaust, knocked out the lead tank, and the second Mark IV pulled off the road to the north and stopped by a haystack. On the other side of the haystack was an M-4. Unable to fire through the haystack because it limited his turret, the M-4 commander pulled his tank forward, pumped two quick shots into the Mark IV and backed up. The German tank exploded and burned. The range of the one-sided battle was seven feet. The third Mark IV tank was burned by its crew which escaped into the hills.

Casole d'Elsa Fiasco

On the division right, CC "A" reached Casole d'Elsa on July 1. The walled town, occupying the key terrain feature in the area, was strongly defended. The only roads toward the town were on ridges within sight and range of the Germans' antitank guns. The terrain prohibited the employment of more than one or two tanks. The only solution was a night infantry attack

with medium tanks and M-10's reinforcing the position before dawn. An attached battalion of infantry was ordered to attack.

Shortly before dawn the infantry reported their troops had secured the town, and tanks were sent up. Mines slowed the tank movement, and at dawn the tanks were caught on the ridge road 1,000 yards south of the town. Before they could pull out, six medium tanks, three light tanks, and two tank destroyers were lost. The Germans had thrown off the infantry attack and still occupied the town.

The attack was repeated the next night but again failed. A contributing factor was the forewarning of the defenders. The third night the attack succeeded. A company rushed the northeast gate while a second company scaled the 15-foot town wall.

The town probably would have fallen the first night except for the relative inexperience of the infantry battalion. Whatever the reason for the failure of the attack, or the incorrect report to CC "A" that the town had been taken, the incident illustrates what can happen to a command when communications channels break down.

Cutting Highway 68 to the East

Across the Cecina River, the Task Force Howze attacked Mazzola and secured it on July 2. Out of nine medium tanks used in the attack only one reached the objective that day. One tank was knocked out by enemy fire, two struck mines and five threw tracks from trying to go over unsuitable terrain. The force pushed reconnaissance on to Highway 68 east of Volterra and cut the road by fire.

On the left, CC "B" attacked Montecatini and held the town against heavy German fire. During the operations just north of the river, both CC "B" and TFH were receiving the heaviest artillery, small arms, mortar and direct tank assault gunfire of the past few weeks. Volterra, situated on the very peak of a 500-meter mountain, was the core of a German position held by at least two battalions of infantry with artillery and tank support. The occupation of the hills to the west by CC "B" and the TFH position on the east flank of the Volterra did not materially weaken the German position. Farther east CC "A," in straight infantry attacks, pushed troops to within small arms range of Highway 68. In supporting the infantry, CC "A" sent a company of medium tanks into several lateral wadis to provide indirect fire support, but because of the terrain, only eight tanks were able to work their way into position.

Since Volterra, key to the defenses north of the Cecina, could obviously not be taken by armor alone, and the division did not have enough infantry with which to attack, the 1st Armored was withdrawn from the line July 10. A detachment of tanks and tank destroyers was drawn from TFH to support the infantry division's attack on Volterra.

The Engineers' Rôle

The Grossetto-to-Volterra operation of the 1st Armored Division covered 33 airline miles, but the most direct road between the two points measured 70 miles. Every one of those 70 miles contained a number of bridges and culverts, each of which was destroyed by the retreating Germans. The logical sites for by-passes were mined, sometimes to a depth of several feet so that a bulldozer would be knocked out when it scooped dirt for a fill. The creek beds were mined. Gaps were blown in the shelf roads. Abatis were thrown across roads where no other type of roadblock could be used, and in several instances bridges were blown where the gap could not be repaired under combat conditions. In those cases the task force using the road was forced either to leave its vehicles and fight on foot or else turn back.

The tankdozer proved to be one of the division's most valuable pieces of equipment during the operation. Its armor permitted it to travel with the detachment of engineers which formed part of the advance elements of each task force. Its blade was essential to construct by-passes and fills. Even its 75mm gun could be used if a fire fight developed unexpectedly. The entire operation could not have moved as successfully as it did without the engineer battalion's extraordinary work.

The Box Score

Terrain which would permit as many engineering obstacles as an average two per mile is unsuitable for an armored division. Yet in its attack from Grossetto to Volterra, the 1st Armored Division captured 1,606 prisoners of war, and according to prisoner of war information, the Tiger tank battalion opposing the division lost four-fifths of its effective strength.

Enemy matériel destroyed during the operation included 115 trucks, 58 self-propelled and antitank guns, 48 artillery pieces and 62 tanks, 34 of which were known definitely to be the 60-ton Tigers.

The rapidity with which the operation moved would not have been possible if the Germans had not been harried and pursued by units of the Fifth Army for more than 100 miles. The German divisions had no time for adequate defenses in the mountain sector. If they had had time for preparation and enough troops to man the positions, the story would have been entirely different.

The division's attached infantry battalions were inexperienced and tired. Yet every defended obstacle on the route had to be cleared by infantry before engineers could prepare a passage for the armor. The infantry and engineers were in action continuously. Since it was not possible to employ many tanks at any one time, tank crews were able to rest periodically but briefly.

It was necessary during the operation, and after the division had been relieved, to make extensive repairs to tanks, trucks and gun carriages. The terrain had been as hard on the vehicles as on the men of the division.

1st Platoon, Troop "B," poses with Nazi flag, just after Rome.

This AT gun, abandoned by Germans, was captured by Troop "B."

A German Ferdinand tank was left by retreating Germans.

The Germans abandoned much matériel in their haste. Here two tanks were left.

The 81st Reconnaissance Squa

*by Lt. Colonel Michael Popowski, Jr.**

THE 81st Cavalry Reconnaissance Squadron, (Mecz)—formerly the 81st Armored Reconnaissance Battalion—the reconnaissance agent for the 1st Armored Division, has had more combat experience than any other similar cavalry organization in this war. Its record began with the Tunisian Campaign and is still continuing. Prominent in its history are the battles of Sened Station, Sidi Bou Zid, Sbeitla, Kasserine, Maknassy, El Guettar, Mousetrap, Mateur, Cassino, Anzio, Rome, Tuscania, Canino, and innumerable smaller battles not so well known to everyone.

Like all good cavalry, the 81st has fought dismounted, mounted, and in combinations of both. It has made rapid advances. It has fought delaying actions. It has performed security missions of flank and advance guard. It has raided enemy positions in limited objective action and harassing action.

Some of the high lights in the squadron's history are: joining of the British Eighth Army and the American II Corps in Tunisia (the 81st met the 12th British Lancers some 40 miles from Gabes); capturing Mateur, one of the keys in the defense of Tunisia; being the first cavalry unit to employ the M-8 armored car in combat; and being the first Allied formation in Rome.

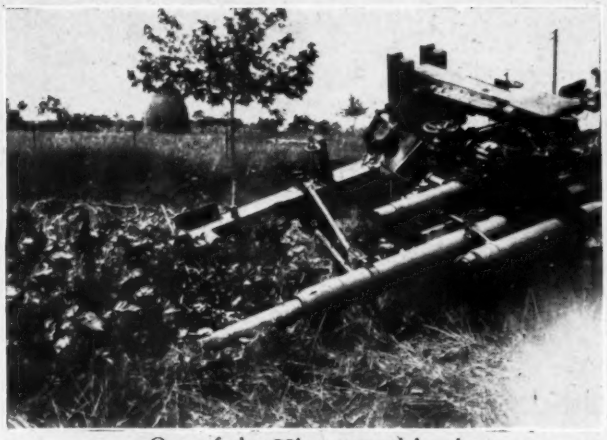
The squadron has accounted for at least twice its number in enemy dead and many times its number in prisoners of war. It would be very difficult to estimate how many prisoners were captured in Tunisia, for during the last two days of that campaign the squadron did not bother to report prisoners, but just lined thousands of them up on the road without escort and told them to march toward the American lines, where they would be taken into custody.

In Italy, the squadron has easily accounted for at least its numerical strength in enemy dead and also its strength in prisoners.

*Former Commander, 81st Cavalry Reconnaissance Squadron, Italy.

This Mark III tank was captured in Rome.

This burned German vehicle was one of many destroyed by Troop "B."



One of the 88's captured by the 81st lies in a field outside Rome.

1st Sergeant Phillips and Sgt. Snawder, both of Troop "B" display another Nazi flag.

Squadron Fights Way to Rome

Of all the interesting days in the squadron's history, one of the most outstanding was that of June 4, 1944—the day it entered Rome. The events leading to this occasion date back to the Anzio beachhead, where the 81st landed on D plus 4 and remained until the breakout.

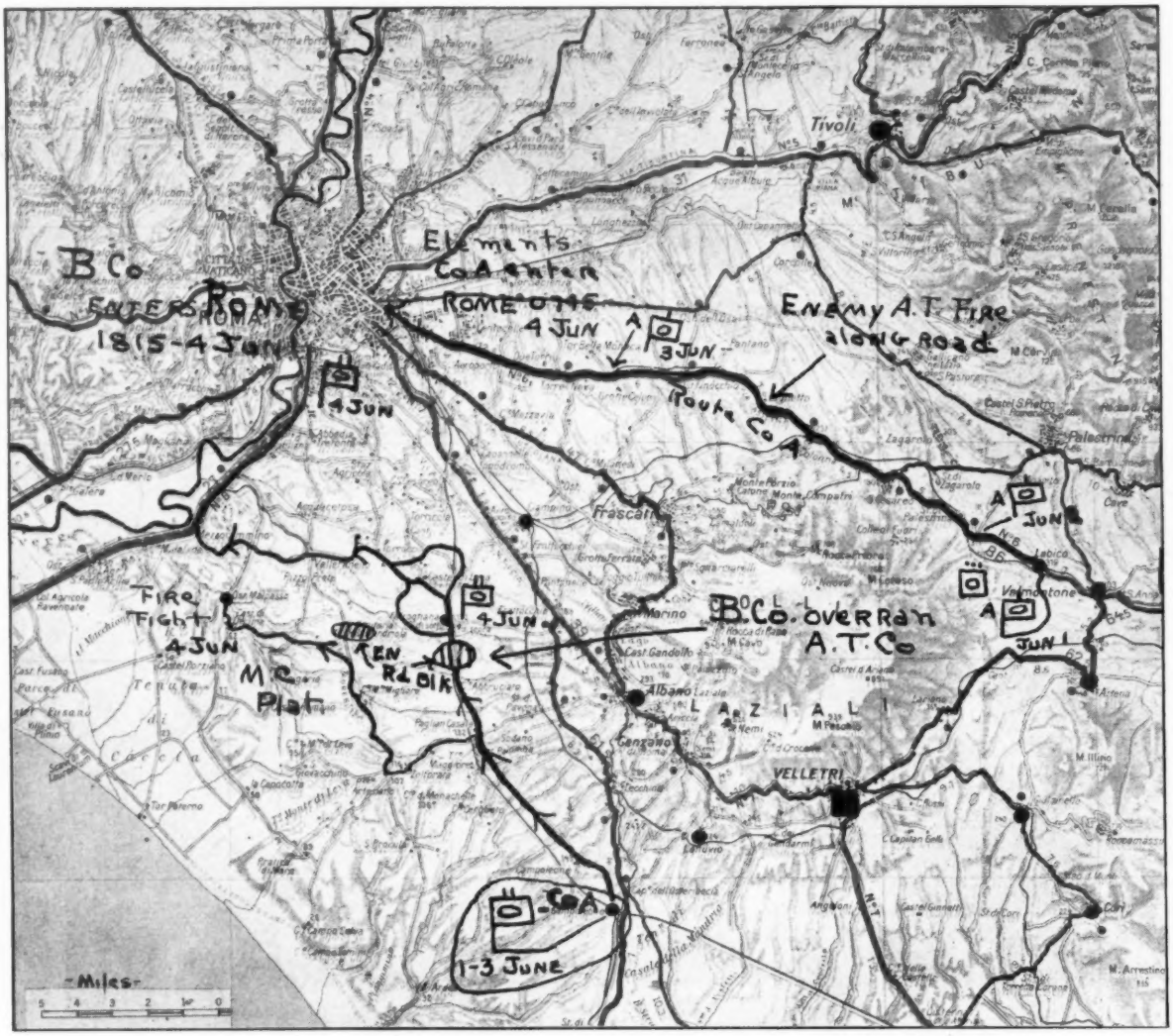
On May 23, the day that the attack began, which broke the beachhead perimeter, the squadron was split. Troop "A" was attached to Combat Command "B," and the rest of the squadron to Combat Command "A." For the first day the unit was held in reserve, but on the second day and every day from then on, some part of the squadron was in action.

On June 3 Troop "A" was with Task Force Howze, slugging it out on Highway 6 a few miles out of Rome. The remainder of the squadron was in the line serving as infantry in the Campoleone area on the right of the British 1st Infantry Division and on the left of the American 45th Infantry Division. Its mission was to maintain contact with the British and protect the left flank of the 45th Division. During the night of June 3-4, the British assumed responsibility for the sector held by the squadron, and the unit prepared to advance on Rome with the 1st Armored Division on June 4. Its mission was to protect the left flank of the armored division with its main axis on the route shown.

It was not light when the first elements of Troop "B" (Captain Jewett A. Dix, commanding) pulled out an passed through the infantry of the 45th Division. The first obstacle that confronted the troops was a mine field which they immediately by-passed, then continued their rapid advance along the road. Apparently, the main German force had withdrawn during the night. Troop "C," commanded by Captain "Dutch" Karcher, followed, and Troop "D," the light tank company, commanded by Captain Walton Goodwin, III, brought up the tail.

Along the route of advance, Jerry had blown every bridge and culvert and left many craters in the road wherever they would be of most value to him. These were covered by small rear guard detachments, and sometimes mines were sprinkled around the scene.

The forward platoon of Company "B," commanded



by Lieutenant Fagan and Lieutenant Farr (the old reconnaissance battalion organization had two officers in each platoon) was advancing so rapidly in the darkness of the early morning that these small enemy rear guard detachments were being scooped up before they knew what had happened to them. The real bottlenecks were the demolitions, and the platoon was forced to take some time to find routes around them. In spite of the demolitions, however, the advance continued at such a pace that Troop "C" and "D" were actually having a road march. It was fun to watch Germans along the route as they came out of the farm houses surprised to see such a formation traveling along the road. They could not understand how it had happened that they were prisoners so quickly. That day even the squadron headquarters took prisoners who had been overlooked by the hurrying troops.

The first resistance encountered was at a point 1,500 yards south of the little village of Falcognana. The morning was still hazy and progress had been so swift and silent that before Lieutenants Fagan and Farr realized it, they had overrun an antitank gun on the side of the road, and the point car was in flames about 100 yards beyond.

In the early confusion of the skirmish it was difficult to make a good estimate of the situation. Tracers were everywhere. Four columns of black smoke spiraled skyward. Later a quick inventory proved that two of the smoke columns were from the squadron's own armored cars and two were from German halftrack personnel carriers, which apparently had been used as prime movers for antitank guns.

The advance unit already had forward momentum, and now it was decided to bring the entire force to bear on the enemy.

Troop "C" was ordered to attack to the left of the road, "B" around the right, and "D" on both sides initially. The scrap lasted about an hour and a half and resulted in the complete overrunning of the enemy position. Four armored cars from Troop "B" were burned and two light tanks from Troop "D" were temporarily disabled. The enemy lost the entire Antitank

(the 14th) Company of the Lehr Regiment attached to the 362d German Infantry Division. About 60 prisoners were counted; the dead were left on the field. Twelve antitank guns, including two 88's, and one American 57 were captured. The smallest gun was a 47mm. In their haste to escape the situation the jerries also abandoned one Mark IV Special Tank at Falcognana. The squadron's personnel losses for this engagement were very light for the advantage gained.

During this skirmish, the squadron became attached to CC "B" and was given the mission of protecting the left of the combat command and seizing and holding the bridge on the Tiber River south of Rome (see map.) Troop "B" had been committed to such an extent that it was out of the question to recall it to put it on the flank of the combat command, so because of the momentum already gathered "B" was to continue on to Rome. "D" was maneuvered on the right flank of CC "B" to protect the exposed flank. "C" was ordered to the bridge south of Rome, and in moving would also protect the combat command's left flank.

Squadron headquarters was leapfrogged in rear of the squadron and finally lit in the Falcognana area where the headquarters personnel enjoyed mopping up and catching the remaining hiding Germans.

At 1815 hours Troop "B" reported that its command post has been set up at the St. Paul's Basilica in Rome. CC "B" was proceeding on "B's" tail into Rome. One platoon of "C" (commanded by Lieutenants Yonkoff and Fellows), which had been thrown out of position during the different engagements of the day, was also in Rome. The platoon was ordered to seize and hold the bridge in Rome just north of Basilica, which it did after a small fire fight, and by 1900 hours both cars and personnel of the platoon had reached the west bank of the Tiber.

Squadron headquarters was then moved to Rome, and the trains were ordered up. Since the area was not entirely clear of Germans, the Tank Troop was given the mission of escorting the trains in. A few Jerry self-propelled guns and antitank guns, which had not been eliminated, were pot-shooting at the traffic on the roads. Under escort of Troop "D", however, the trains pulled into the battalion area at the Basilica about 0200 hours on the morning of June 5.

Troop "B" bore the brunt of the move. Of the 14 armored cars with which it started, only 7 reached Rome. Other losses within the squadron were negligible. When squadron headquarters rolled into Rome, it found Troop "B" guarding some 150-200 PW's that had been picked up on the way. Altogether, the squadron accounted for over 200 prisoners that day—most of them from the German 362d Infantry Division.

The area around the Basilica also became the command post for CC "B". The Chief of Police of Rome shortly appeared on the scene to ask the general's help in event of any trouble in the city that night, and said that to the best of his knowledge there were no other Allied troops in Rome.

The airline mileage from the squadron's starting point that day to the St. Paul's Basilica was about 20 miles, but the route necessarily followed by the squadron was about 35 miles—a good advance in the face of an enemy.

During all of this time Troop "A" was detached from the squadron. In the beginning it was attached to CC "B"; later to Task Force Howze. Troop "A" had the honor of cutting the Cori-Velletri road at Giulianello on May 25, of capturing Artena on May 26, and of performing splendid reconnaissance for this task force. From Artena to Rome Troop "A" was a part of the armored column which broke the back of German resistance in that area.

Captain Roy Manley, commanding Troop "A", in his report to the squadron tells of Lieutenant Kline and staff Sergeant Matthews leading their platoon into the suburbs of Rome early in the morning of June 4 at approximately 0700 hours. Sergeant Matthews in the point car, first to cross the city line, was followed by medium tanks of TFH. At this point the lead tank was knocked out by waiting German self-propelled guns on the outskirts of the city. This stopped the advance formation for a while, but the reconnaissance platoon by-passed this resistance and guided some M-10 tank destroyers into position to knock out the resisting self-propelled guns. Then the entire force entered Rome, and stayed.

During the early hours of the morning of June 5 the 81st received orders for the next day—to continue the advance to the North. The entire unit then rolled across the Tiber in advance of Combat Command "B", and the pursuit of the Germans continued.

Members of the 81st Reconnaissance Squadron are greeted by cheering Italians as they enter Rome, June 4.

General Hawkins' Notes

The First Requirement of a Citizen Army

IN the issue of the *Saturday Evening Post* for December 23, 1944, there appears an article written by Brigadier General John McA. Palmer, U.S. Army, entitled "General Marshall Wants a Citizen Army." This article is exceedingly well written and interesting. General Palmer has been well known for many years as a student of American military policy and a writer on the subject.

In the current article, General Palmer has set forth a theory to which he has held for a long time and which he claims General Marshall has approved as published in War Department Circular No. 347, dated 25 August, 1944.

The plan for a postwar military structure as advocated by General Palmer, he states, is the simple plan for a Citizen Army which President Washington submitted to the First Congress in January, 1790, but which was overlooked and forgotten in all of the subsequent plans and projects as expressed in the various studies and proposals through the years until he, General Palmer, dug it up out of the Washington Papers in the Library of Congress shortly after World War I. At that time, it is believed, General Palmer submitted his Washington plan to General Pershing, who approved it. As had always been the case, however, the plan was opposed by certain officers and congressmen who believed in another plan described by General Palmer as the Expansible Regular Army Plan.

In a very interesting way in his brief article, General Palmer describes the two opposing plans—the Citizen Army Plan based on universal service, and the Expansible Regular Army Plan. The first of these plans as proposed by Washington is the plan which General Palmer wants adopted now for the future, and, recommends it in a very convincing way.

My object in writing this article is to recommend the reading of General Palmer's article and to call attention to some problems which would have to be solved if Citizen Army Plan is adopted.

Universal service, including military training of all suitable young men between the ages of 19 and 22, would be approved probably, by the majority of our people at this time. So far, so good. General Palmer says, however, that the army of the future would be composed of a "relatively small regular army," reinforced when necessary from a "great citizen army reserve composed of trained citizen officers and soldiers." He states many times in his article that highly trained professional officers would be necessary in sufficient numbers to leaven the whole when it became necessary to expand the army to moderate or great proportions. It is not explained just how these highly trained professional officers would be obtained in sufficient numbers. What number would be considered sufficient?

A man cannot become a highly trained professional officer simply by going for a few years through the course at a military school. The school is the A B C of his training. After graduation in such a school he needs experience in handling troops. He needs experience in training and leading small units, then larger units, and then great units. Staff officers also need both schooling and practice. The training of a professional officer never ends during his entire active service. He must keep abreast of the changes wrought by new weapons, new inventions and new ideas. And experience through all the grades of rank is desirable if not always possible.

It would be impossible for the regular officer to obtain this training and this experience unless he has many opportunities to serve with troops and in staff work. There must be enough troops in the regular army to afford the necessary training and experience for a "sufficient number of professional officers." If a great proportion of the professional officers spend most of their time in supervising the basic training of groups of the citizen army reserves, they will never become highly trained officers. They need training in leadership of well trained regular units up as high, certainly, as the regiment. They need to participate in many tactical exercises for all these units.

The regular units themselves need to be trained, and to be fully officered and fully manned in order to give regular officers the necessary experience. Otherwise, when regular officers are training the citizen reserves it will be the blind leading the blind.

The size of the regular army must, therefore, be predicated upon the number of troops necessary in the regular army to give this experience-training to a sufficient number of professional officers. First of all, however, an estimate must be made of the number of professional officers needed.

Now, if universal service is established, a great number of regular officers of lower grades—trained in the regular army, not merely in schools—will be necessary to supervise the elementary training of the citizen officers and soldiers. Therefore, many more professional officers will be needed than merely those required to officer fully all the units in the regular army. These regular units must be fully officered at all times. They must not be left to do the best they can with insufficient

officers and men in the units. The units must be kept at war strength. Otherwise, the training of officers and noncommissioned officers in the army will not only be insufficient, but absolutely wrong or false in many respects.

During the years after World War I, and up to World War II, the regular officers were dispersed among the Organized Reserves, the R.O.T.C., and the National Guard, to such an extent that the regular units in the army were pitifully under-officered. The policy was to let them "get along" with far too few officers to carry out properly a tactical exercise of the simplest character. Of course, the army did not have the necessary number of men either. Both were necessary. The result was that many officers got no troop training for periods of ten and fifteen successive years at a time.

If this plan of a citizen army and universal training is to be a success, these problems must be solved or the people will be deceived as to the competence of the professional officer and the correctness of the training he is giving to the citizen soldiers and officers.

Training citizen soldiers in basic courses for the individual will not require the highest order of professional ability and knowledge. But leading those soldiers in collective training and battle is another matter. The professional officer must know far more than how to train recruits individually.

The training of the officers of the citizen army, who are not professional officers, presents still another problem. Our system for training reserve officers during the twenty-odd years after 1918 did not work out too well. The best part of it was found in the R.O.T.C. which provided for military training of young men in colleges and schools. But these schools did not always go about it with enthusiasm. The time devoted to it was much too small, and the number of students so trained was very limited. Military training in all high schools, academies and colleges should be compulsory for all students. The graduates of colleges who have qualified for commissions as officers in the reserve army must also be required to devote several years of their lives to the basic training of the citizen soldiers in local units. If this is not done, too many regular officers will be required for citizen training, and this will interfere too much with their own training in the regular army. As stated before, such was the case in the twenty-year period after World War I, even though the number of reserve officers and soldiers receiving training was many times less than is contemplated in the universal service idea.

Furthermore, the training of students in schools for qualification as reserve officers is not enough. These young men will need the additional training and experience that will be afforded by their assignment to duty as officers of the local units of citizen soldiers. Thus it appears that drastic changes in the training of our citizen officers must be adopted if the universal service plan is put into effect.

It becomes more apparent, therefore, that the universal service idea does not mean that we shall be able to "get along," with a small regular army. It may be true that, as General Palmer says, a *relatively* small regular army may be sufficient. But, as compared with our ideas of the past, the regular army must be very large. A sufficient number of "highly trained professional officers" is not to be obtained by our methods of the last quarter of a century.

One of General Palmer's ideas is that the citizen army plan, based on universal service, will enable us to put a trained army in the field in much less time than ever before. No doubt this is true—but even a comparatively small expeditionary force would require valuable time to organize and be made ready. A sufficiently large regular army from which such a force could be drawn instantly is necessary if such a force is not to be "too little and too late."

Any force of any size, needed in the field at once, must be a trained force. Then while that force is carrying out its mission in the field, a sufficient number of the local units of the citizen army can be concentrated and organized into predetermined large units commanded and staffed mostly by officers drawn from the Regular Army, the National Guard, and the most experienced officers of the Reserve Officer's Corps. With the soldiers already fairly trained, the large units can be made ready for the field in about one-sixth the time it has heretofore taken to activate and train a large army. This, of course, could be done only if equipment earmarked for the contemplated units has been kept up to date in various conveniently located store houses.

Now, the principal difference between this Citizen Army Plan and the Expansible Regular Army Plan is that, in the former plan, there would be universal service and predetermined units into which the citizen soldiers would be placed; and in the latter plan, there would be no universal service and, therefore, no large citizen corps of trained officers and soldiers to call upon for immediate service.

In both plans, a Regular Army larger than we have ever had before is necessary.

And so, by all means, let us have universal service. By all means, let us have General Marshall's citizen army as advocated by General Palmer—if the plan includes a regular army large enough to produce highly trained professional officers in such numbers as may be determined necessary by a careful study of the subject.

Certainly, the futile system used for twenty-odd years after 1918 should not be perpetuated nor duplicated. In that system a number of officers were trained fairly well for staff duty, but very few regular officers had enough service with troops. Even when they were assigned to troop duty they found the ranks so depleted of soldiers that they could not, in most instances, begin to gain the experience and practice in troop leadership

that they sorely needed. To fit an officer for combat leadership, he should have for some years experience in command of small combat units. He should not skip over this training. It is most important if he expects ever to be a competent leader of large combat units. In the past, many officers have attained high rank and have been assigned to command large units—from a regiment up to an army—without having had any really sufficient training in command of a platoon, a company or battalion of combat troops. The results have not been fortunate.

An officer who took the courses in a Special Service School, the so-called Command and General Staff School, and the War College was deemed a trained officer, whether he had had long experience with troops or not. Most of them had not had such experience.

Universal service without a proper system for training professional officers is only a half measure. It is not necessary to have a standing army large enough to fight a serious war by itself. But it is necessary to have an army large enough to train professional officers with full strength units. To have a standing army which is not adequate for that purpose is to waste at least half of the money that supports it.

Commentary on Current Ideas About Missions of Cavalry

A PRESS RELEASE on the subject, "The Cavalry," was given out by the Bureau of Public Relations, War Department, on November 19, 1944. This article was well written and very interesting. It describes the organization and armament of the mechanized cavalry units which have played an important rôle in the campaigns in Africa, Italy and western Europe. It gives examples of the indispensable service which mechanized cavalry units have given.

However, when this release attempts to describe the missions of cavalry it becomes inconsistent. In one place it states, "Primarily, cavalry is reconnaissance." And then, later on, it describes the cavalry missions of pursuit, surprise attacks, harassing the main body of the enemy in retreat, "encircling maneuvers to cut them off," fighting to break through the enemy screen, etc.

Now, these missions certainly require something more than reconnaissance. In our cavalry, it was always maintained that reconnaissance was not the most important duty of cavalry, but only *one* of its important duties.

Later on, this release includes the following statement: "Working in close coöperation with the infantry, artillery, and other ground force elements, the cavalry often is assigned specialized tasks, such as seizing specific important objectives in surprise operations and holding them until other units can arrive. It acts as a mobile reserve. It fights delaying actions when other units meet with reverses. It maintains liaison between larger units. It fills in gaps until regular reserves can arrive. It engages in flanking attacks and maneuvers."

That is a fair statement of the missions of horse cavalry. Although horse trained cavalrymen are often required to act in a mechanized or dismounted capacity, we doubt the capacity of mechanized cavalry to perform all of these missions. Practically all of these missions, as well as the mission of reconnaissance, require cross-country movement. There are no vehicles in existence which can move across all sorts of varied terrain as speedily, as safely, or with the same stealth and effectiveness as a horse.

The mechanized cavalry squadrons are equipped with jeeps and armored cars, light tanks, and self-propelled assault guns. The jeeps have no armor. The armored car (M-8), which is the only real armored vehicle that the mechanized cavalry troop has for its protection while on reconnaissance, is described in this release as having the punch and armored protection of a light tank. But reports from battlefields in Europe say that the armored car (M-8) is definitely *not* an off-the-road car. Its armament, which consists of a 37mm cannon and a .30 caliber machine gun, is wholly insufficient to protect it against fire of light cannon or .50 caliber machine guns in enemy tanks. There are no antitank guns with a troop of mechanized cavalry which would permit it to fight delaying action against enemy tanks, or, in fact, to take over any of the rôles recited in the paragraph just quoted from the release.

The cavalry reconnaissance squadron has three reconnaissance troops, one assault gun troop and one light tank company. The assault guns are 75mm Howitzers, self-propelled. Their mobility is insufficient for cross-country cavalry operations. The result is that these mechanized squadrons of cavalry are often badly shot up or almost completely destroyed when they are required to fight to carry out dangerous missions of reconnaissance, to say nothing of the other missions recited in the release.

Furthermore, one wonders why these other missions are recited at all, since there is no U. S. cavalry in Europe other than these mechanized cavalry reconnaissance squadrons or troops. Mechanized cavalry has certain attributes that make it invaluable, but it does not substitute for horse cavalry. It is not suitable for missions of reconnaissance off of roads or for the many other missions that horse cavalry could, and in the Russian cavalry does, perform with celerity, safety and effectiveness.

Our armored divisions have taken over the rôle of

cavalry, however unsuitable they may be for some missions. The mechanized cavalry reconnaissance squadrons should be used only for reconnaissance and mostly for the security of the forces to which they are attached. When reconnaissance in force is used, it should not be performed by reinforced reconnaissance squadrons but by full powered armored units whose security from surprise is provided by cavalry reconnaissance squadrons.

This release goes on to state that all cavalry units are basically mechanized and, therefore, do not take horses overseas with them. It explains that further reasons for not taking horses overseas are the difficulty of transporting horses in ships and the probability that American horses would get sick in foreign climates such as are found in the tropics. It states that if horses are needed they will be purchased locally where the troops are serving. It states that a provisional squadron of horse cavalry, mounted on horses purchased locally, was organized in Italy, and recites some of its exploits.

One wonders if the necessity for mounting horse cavalry in Italy was not the same necessity which exists everywhere. It is believed that the difficulty of shipping horses overseas could have been overcome had it been understood and believed unreservedly that horse cavalry was needed. Thousands of horses were shipped to the Philippines in 1899, and only a few weeks were required to get them used to the climate. They served splendidly during the entire insurrection.

Really efficient horse cavalry cannot be improvised. Nor can horses purchasable locally in the field of operations be satisfactory. The only way to procure good horses is to establish and maintain home depots at home. And the only way to have both horses and cavalry horsemen properly equipped, trained and conditioned for field service is to do it at home.

To break up our cavalry deliberately by mechanizing it is to suppress horse cavalry completely. To talk about improvising it when and where it is found necessary is foolishness. Such improvisations may be made here and there in very small numbers; but even in small numbers such units cannot be as efficient as they should be. And, in large numbers, which are really needed, such improvisations are impossible.

The use of cavalry reconnaissance units, either mechanized or horse, has been very much curtailed on the Western Front in Europe since the virtual stalemate that occurred after the Germans established their line of resistance along the Siegfried Line in western Germany. Up to that point, however, there was a great demand for these cavalry units. There was need for them in North Africa and in Italy. And there will be great need for them again in Germany and in the Philippines, to say nothing of China. Gallant and efficient as our cavalry personnel has proved itself to be, it has been shown very definitely that in many instances horse cavalry units could have done better work at less cost in casualties.

And, for missions other than reconnaissance, large units of horse cavalry could have given splendid aid to our infantry in every theater of the war. Indeed, the 1st Cavalry Division, trained as a horse cavalry unit, has already distinguished itself in the Southeast Pacific area, although, because of the island hopping nature of the operations it had to be used without its horses. In fact, it has no horses.

Future operations in Europe, in the Philippines, and possibly in China, would be filled with opportunities for the useful employment of large horse cavalry units if there were any such units in our army. However excusable it may be, the absence of such units will be very unfortunate.

Many of our most expert horse cavalry officers are now serving in armored divisions where, together with excellent officers drawn from other branches of the service, they are doing splendid work. These armored divisions are indispensable in modern warfare—but they are not the only useful branch of the service.

Our people have now discovered that infantry still remains fundamentally the basic arm of the service despite the predictions of some pseudo experts before and after the beginning of the World War II. Although armored troops have won and are winning many battles, or have assisted the infantry and other branches in winning, experience has proved that they are not as effective on as many occasions as they were before the advent of the antitank gun and the mine field.

There are situations in battle where armored troops are unsuitable and cannot be used effectively to assist the infantry. Very often it is in such situations that strong horse cavalry forces could be very effective if they were available. Wherever infantry operates in large numbers, cavalry is needed to help it. And very often, as pointed out many times before, cavalry (meaning horse-cavalry) in combination with tanks can be more effective than cavalry alone or armored troops alone. This is what led to the famous tank-cavalry teams in Russia.

As stated before in former *Notes,* there is nothing to be gained by bemoaning the fact that we shall not have an adequate highly trained force of horse cavalry to use in the war. But, perhaps, it may be well to bear in mind for future use the facts and principles that have been repeated so often in these *Notes* and confirmed as substantially in some theaters of this great conflict.

Philippine Islands
14 January 1945

"The U. S. Cavalry Association

"Dear Sirs:

". . . One thing that has been difficult for many to understand is how the cavalry, dismounted, can move so fast. I believe the cavalry, even though dismounted, still thinks in terms of mounted cavalry, which is a fast and mobile force.

"Yours truly,
"_____, Lt. Colonel
Hq. 7th Cavalry."

Editorial Comment

Know Your Enemy—The Jap

Pearl Harbor and Bataan brought forth a flood of highly imaginative stories about the invincibility of the Japanese soldier. Most of these pictured the Jap as a superman. Then, after Guadalcanal, we became overconfident and tried to make him out a buck-toothed, near-sighted, pint-sized monkey. As usual, the truth lies somewhere between these extremes.

In war, it is always a serious handicap not to know your enemy, yet we Americans are at a loss when we try to understand just what makes the Jap tick—particularly his predilection for *face saving, hara-kiri,* or the *banzai* charge against hopeless odds.

It is now becoming crystal clear that the Jap is a robot-like creature whose thoughts and actions are influenced largely by ancient custom, fanaticism, and thorough basic training. He has proven himself to be uniformly brave, aggressive, and a first-class fighting man. He definitely is no superman; neither is he a pushover.

The Japanese high command probably understands the tactical employment of the combined arms, but deficiencies in armament and equipment have generally prevented their decisive employment. It may be affirmed that in no category do the Japanese possess superiority in fighting equipment over American forces.

In their concept of war the Japanese exploits to the fullest extent the ancient law that the human element is the decisive factor. Hence the infantryman is the heart and soul of Japanese military power. By comparison the Allied armies consider this concept to be sound basically but requiring modification to take advantage of scientific invention and the present industrial age.

The capabilities of the foot soldier constitute the strength, and his deficiencies, the weakness of the Japanese military machine. He is not as adaptable to new situations as is the American soldier. Being a creature of habit he does things best that he has done over and over again. His basic training has been exceptionally thorough. The Jap soldier uses his basic weapons efficiently; in fact, he uses them so well that he is able to accomplish more than might be expected or predicted. His camouflage, concealment, reconnaissance, and the employment of ambushes, patrols, and raiding parties are superior.

The Japanese ability to move sizable forces of foot soldiers through jungle and over rugged terrain is truly remarkable. The explanation is to be found in their system of thorough basic training of the individual, the Japanese soldiers rugged physical condition, and his extremely frugal requirements.

The Japanese is offensive minded. His attacks are daringly planned and executed. His reliance upon the human equation with corresponding deficiencies in matériel often make his attacks weak in fire-power—too weak to overcome the material advantage of the Allies. Nevertheless, the Japanese may attack at anytime, even when they are thoroughly whipped.

The Japanese are masters in the art of terrain appreciation and utilization. The stubborn and sustained defensive powers of small units have been the most difficult single feature of Japanese warfare to deal with and to overcome. The superior defenses of small units have contributed more to the combat effectiveness of the Japanese ground forces than all other tactics combined. It now seems reasonable to assume that the rate of advance of Allied operations will depend primarily upon the rate at which men and supplies can be concentrated for each succeeding operation and relatively small Japanese units at critical points can be annihilated.

A. E. R.

The Value of a Service Journal

What is the value of a Service Journal?

As stated in Article III of the Constitution of the United States Cavalry Association "The aim and purpose of the Association (which publishes The CAVALRY JOURNAL) shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions and the solidarity of the cavalry of the Army of the United States." The CAVALRY JOURAL or any other service journal, is not an official publication of the War Department. Contributions appearing therein do not necessarily reflect official thought or indorsement. Articles represent the personal views of the author and are published to "stimulate interest in, provoke thought on and provide a free forum for the decorous discussion of cavalry affairs."

The editorial policy of The CAVALRY JOURNAL has been, and will continue to be, one of coördination and coöperation. The JOURNAL endeavors to bring to its readers articles and ideas from any branch, theater or country which are considered of value in promoting professional improvement.

It is not intended that the Service Journals be policy making, nor that any part of any article be construed as substituting for or deviating from information contained in training manuals. Articles which might appear to differ from accepted policies set down in the manuals should be interpreted as representing expediencies pertaining to a particular situation.

Material is intended to promulgate various tactical and technical aspects of fighting which have proved

sound in combat. But each situation confronting the fighting man in battle is bound to be slightly different in one way or another. The final decision, therefore, must rest with the commander. Lessons are learned from experience—sometimes our own, and sometimes that of others.

In a letter to the editor of the Military Review General Marshall wrote:

"Lessons learned in recent campaigns are a valuable contribution to our present training program . . . and will facilitate the revision of our Command and General Staff doctrine in the light of recent battle experience.

"Many commanders and staff officers are having unusual and valuable experiences in battle. Whenever it is possible, it is my hope that these officers will make available to the Service as a whole this important information while it is still fresh in their minds."

What have you learned in combat?

Write it down--100 to 2,000 words.

Tell your own story; tell it your own way.

Write about what to do—what not to do—to save lives, time, weapons—how to outwit and outfight the enemy.

Write what your unit did in battle—what the enemy did—and what lessons were learned.

Send your story through your Public Relations Officer for "field clearance." Mark it for THE CAVALRY JOURNAL, 1719 K Street, N.W., Washington 6, D. C.

Let others benefit from your experience.

Wrong Addresses

The list of addresses published in the November-December issue of THE CAVALRY JOURNAL brought in so many letters that we were unable to send our thanks individually, so we should like to express thanks here to all who sent addresses. Your help is greatly appreciated. Can any more of you help locate these subscribers? Is your name here? Send in the correct address, and THE CAVALRY JOURNAL will be mailed at once.

Abdulah, T/5 Calvin
Akins, Lieut. Ted B.
Andrews, Lieut. Armour J.
Andrews, Lieut. Walter E.
Apparius, S/Sgt. R. C.
Arndt, Pfc. Thomas R.
Arnold, Lieut. Wm. H.
Bahr, Lieut. Andrew P.
Bailey, Lieut. Leon E.
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Barnhart, Lieut. Frank H.
Barrett, Lieut. James F.
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Blackford, Pvt. Dayton S.
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Bruce, Lieut. Robert W.
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Norton, Lieut. Clifford J.
Norwood, Lieut. Leonard L.
O'Connor, Major Edwin
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Perry, Lieut. Robert P.
Pfeiffer, Lieut. William E.
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Riede, Lieut. E. P.
Roessler, Lieut. Frederick F.
Rouh, 1st Sgt. Russell H.
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Sawyer, Lieut. John J., Jr.
Schmitt, Lieut. Paul J.
Schutt, Lieut. William C.
Secondari, Lieut. Hermes
Seiley, Lieut. Carl A.
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Smith, Lieut. Chas. Z.
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Spencer, Lieut. Gayle H.
Spratt, Capt. Leonard F.
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Storm, Lieut. Arthur A.
Sutherland, Lieut. Wm. A., Jr.
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Thomison, Pvt. Jasper L.
Thompson, Col. F. J.
Thompson, Capt. Lynn G.
Thompson, Capt. Olin W.
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Tritsch, Lieut. Arthur A., Jr.
Van Patten, Lieut. Max M.
Wadelton, Lt. Col. W. S.
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Walker, Lieut. Philip G.
Waring, Lieut. Charles W.
Warner, Lieut. J. W.
Warren, Lieut. James A., Jr.
Watts, Lieut. Thomas C.
Webb, Capt. Richard A.
Wells, Lieut. Claude M.
Wessels, Capt. G. A.
White, Major Gerry L.
White, Lieut. S. E.
Whittenberg, Lieut. P. W.
Willard, Pvt. J. J.
Williams, Lieut. Willard C.
Willis, Lieut. Charles B.
Wright, Lieut. Owen O.
Wright, Sgt. Wilbur
Yeargan Major A. C.
Yow, Major John W.
Zeskey, Lieut. Harry C.

"Somewhere in the Philippines" Major General Verne D. Mudge (left), Commander, 1st Cavalry Division, confers with Major General Innis P. Swift (right), former Commander 1st Cavalry Division. Lt. Colonel Stevens in rear.

Left to right, Major General Verne D. Mudge, Commander 1st Cavalry Division, General Douglas MacArthur, Lt. General Richard K. Sutherland and Colonel Charles A. Sheldon, Chief of Staff, 1st Cavalry Division.

1st Cavalry Division on Leyte

At Tacloban, Leyte, P. I., Colonel Charles A. Sheldon, Chief of Staff, 1st Cavalry Division, talks with Sergeant Antonio Maningo, former Philippine Scout. Both belonged to Troop "B," 26th Cavalry (P.S.) before the war.

Horses captured on Leyte were quickly rounded up and utilized. Here four cavalrymen pose proudly as they mount to seek out elusive Japs. Cavalry, sent dismounted to the Philippines in 1899, was eventually remounted.

A squad of the 1st Cavalry Division's Provisional Reconnaissance Unit on line. Horses are native Filipino, captured Japanese, and a few re-captured Preston-branded U. S. Cavalry horses, used by the Japs on Leyte during their occupation.

The size of this and other mounted elements of the division has grown considerably since the start of the Philippine Campaign when these photographs were taken. These improvised mounted units have proved an invaluable asset.

Below: Provisional Reconnaissance Unit moves out of the division rear echelon. Horses are being used by 1st Cavalry Division for both reconnaissance and for packing in the rugged mountainous terrain of Leyte Island. (See Cover.)

1st Cavalry Division

In the Admiralty Islands – Part II

AFTER the strategic points on Los Negros had been secured and Seeadler Harbor opened to naval vessels and convoys, the 1st Cavalry Division proceeded with mopping up Jap stragglers and performing various reconnaissance missions to the smaller harbor islands.

Patrols

On March 10 Troop "B" of the 8th Cavalry was the first to be off. Its mission was to clear the entire Mokerang peninsula of the enemy. The troop, pushing forward rapidly, reduced isolated pockets of enemy resistance and by nightfall reached the top of the peninsula.

Meanwhile, the 5th Cavalry, having consolidated their positions and effected resupply of the units, pushed out strong combat patrols in an effort to locate and pinpoint Jap positions in the area west of Papitalai.

A patrol from Troop "B" 5th Cavalry, which was part of the squadron working its way west along the southern coast of Los Negros, encountered a strong enemy position about 500 yards southeast of the Palapi Hills. The patrol by-passed the enemy and, continuing on its mission, encountered no other Jap positions as far as the Palapi Hills. During its return to the Troop CP the patrol ran on to a group of 5 Japs on a trail 500 yards southwest of the Pitilu Lagoon at what had apparently been a Jap platoon bivouac the night before. As the Japs fled, the patrol followed in hot pursuit, but the Nips unfortunately escaped.

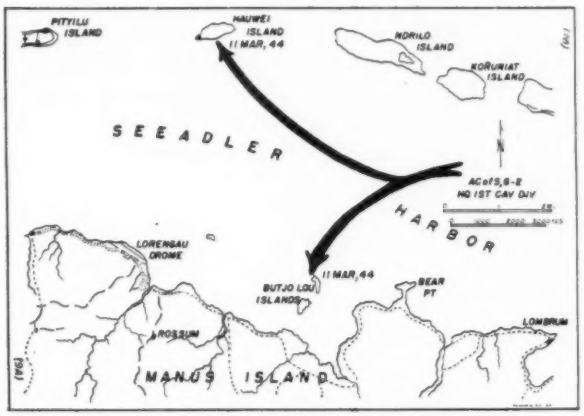
A small patrol from Troop "B," 5th Cavalry led by Lieutenant Ralph E. Hill, who was later killed in action, made a reconnaissance in a native dug-out canoe from the Ihon Lagoon through Porharmenen Creek to the small bay just south of Puthut Point, where they sank one Jap supply barge heavily laden and under way.

The 5th Cavalry Regimental Reconnaissance Platoon under the command of Lieutenant Tellefson left the "E" Troop bivouac area at 0945, and patrolled to the west as far as the hill that later was to gain much local renown as Hill 260. Unable to advance farther because of the heavy concentration of enemy machine-gun and rifle fire, they called for an artillery concentration. When the concentration lifted, another patrol, led by Lieutenant Hanson, requested permission to penetrate the Jap lines and gain the high ground in the rear. Again the patrol was able to penetrate the lines, but was unable to gain the hill. After suffering a number of casualties, the patrol withdrew.

At last it appeared that the 5th had run the Jap to earth. It was anxious to dig him out and really get at him. By the end of the day, the ranks of the Jap barges were seriously depleted. In addition to one sunk by the patrol, another had been sunk by the Weapons Troop of the 5th Cavalry.

The Troop "B" OP, situated at Porlaka, sighted a barge with 10 to 15 Japs in Lemondrol Creek. A mortar concentration, reinforced by the fire of a 37mm antitank gun, was placed on the target, and the barge sunk. A third barge, sighted in the same area at 1830, succeeded in escaping and the gunners and the mortar crews fell to accusing each other of being rotten shots. A fourth barge was sighted about 30 minutes later, but since it was out of range of the regimental weapons, an artillery concentration was registered. The first salvo flushed two more barges from their hiding places. All three fled to the south; although one was hit, all made good their escape.

Map 1. Checkered area indicates strategic points of Los Negros Island which the cavalry had secured by March 10.



Map 2. Arrows point to two strategic harbor islands reconnoitered in force by elements of 5th Cavalry, March 11. The patrol to Hauwei ran into serious opposition.

The day ended without any serious engagements, but the Japs had been located and the morrow augered well for the cavalrymen.

In addition to patrols on the Mokerang peninsula, the 2d Brigade was busily engaged in clearing the beaches of supplies and equipment. The engineer squadron was performing prodigious tasks. The combination of rain and heavy trucks was too much for the roads. The bottom fairly fell out of them. Even the amphibious tractors became mired, but the engineers somehow kept the roads open and the supplies and equipment moving.

Reconnaissance in Force

On March 11 reconnaissance patrols of the 5th Cavalry located heavy Japanese fortifications about 1,200 yards southwest of Papitalai, and immediately directed a concentration of mortar and artillery fire on the sector. The high ground of this area was occupied by elements of the 5th Cavalry just after noon, following the high-explosive preparation.

The division commander decided that in order to support an operation against Lorengau, forward artillery positions must be located, and directed that immediate steps be taken to select and occupy the positions. The division artillery commander recommended that the three battalions to be used in the operation be located on Hauwei Island, Butjo Lou Island or Bear Point. These places were all in enemy territory, but whether or not they were occupied was not known except that an enemy garrison had been located on Hauwei some time previously. Three reconnaissance teams were formed and one team was assigned to each position. All were given the same instructions: (1) reconnoiter for suitable landing beaches, (2) locate enemy disposition and installations, (3) find out the enemy's strength and (4) determine whether or not the location was suitable for artillery.

The patrol to Butjo Lou encountered no opposition. Its report indicated that there was a suitable landing beach and suitable gun positions for one battalion.

The patrol to Bear Point reported that it was not occupied, that there was no suitable landing beach, and that gun positions for one battalion only were available.

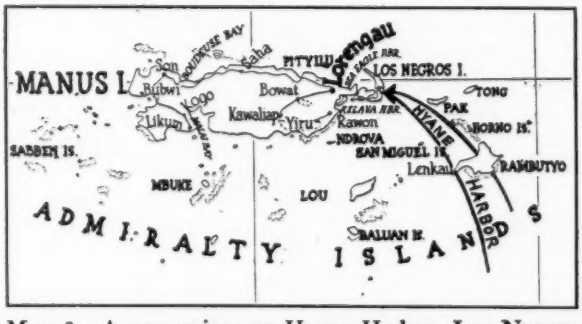
The patrol to Hauwei Island ran into a hornet's nest. After making a thorough search for an approach through the reefs surrounding the island, the patrol discovered a narrow channel near its western end. The channel was treacherous—weaving its way around the western end of the island and coming into a beach on the sea side. While only one boat at a time could pass through the channel, the beach was sufficiently large to accommodate two LCM's.

After landing on the beach the patrol immediately pushed its way inland. The island was a coconut plantation and it showed signs of recent occupation because the underbrush was fairly well cleared.

After moving inland about 100 yards, the patrol was engulfed in a withering cross fire of rifles, machine guns, grenades and mortars. The patrol leader coolly disposed his patrol in the available cover, made a quick visual reconnaissance, and an estimate of the situation. He found that his position was precarious, cut off from the beach and unable to go farther inland. Since he already had the information which he had been detailed to obtain he decided to fight his way back to the beach, reëmbark, and return to headquarters.

When the patrol had made its way back to the beach, it found that the LCV had backed off when the firing had started. It immediately put back in, however, when the troops reappeared. Some of the members of the patrol had jumped in the water, and the LCV on its way in to the beach picked up these men. About 6 men, and the boat crew were aboard when a mortar shell hit the boat, already damaged by machine-gun fire, and sank it.

As the men saw their only means and hope of escape go down with that boat, undaunted, they took to the water and started to swim to friendly shores 7 miles away. PT boats from Squadron 18 stationed in the harbor rushed to the rescue and picked up most of the survivors. An LCM was later dispatched from Salami Plantation. This boat picked up one man, who had been in the water for over 5 hours.



Map 3. Arrow points to Hyane Harbor, Los Negros, where original landings were made February 29. The larger island of Manus, invaded March 15, lies to the west.

It was an expensive reconnaissance, but the information gathered indicated that two battalions of artillery could be put on Hauwei, and the placing of two artillery battalions on this coveted location saved countless lives in the ensuing operations.

Clearing the Harbor Islands

On the following day the 2d Squadron, 7th Cavalry, moved from its position on Lombrum Plantation and landed in LCV's, LCM's, and Buffaloes on the western tip of Hauwei Island. The attack was preceded by a heavy concentration of artillery from Mokerang Plantation and a naval bombardment from inside Seeadler Harbor. Prior to the assault, Kittyhawks bombed and strafted the landing beach and inland areas of Hauwei. Stern Jap resistance was rapidly overcome, and by nightfall the landing force occupied the western half of the island.

Enemy barge activity during the night appeared to be increasing, but watchfulness of the PT patrol reduced to almost zero the chances of them ever arriving at their destination.

On March 13, the 2d Squadron of the 7th Cavalry on Hauwei Island committed its reserve, which had been waiting patiently on Lombrum Plantation. Continuing their advance eastward, the squadron inflicted heavy casualties on the occupants of the enemy's deeply entrenched positions and the tanks again proved their worth in destroying pillboxes.

Reconnaissance patrols operating southwest of Papitalai Mission encountered a platoon of Japs, which they quickly dispersed after a skirmish which resulted in 6 enemy casualties.

Meanwhile, supporting naval units shelled Pityilu Island, 4 miles west of Hauwei. It appeared that the 1st Cavalry Division intended to make short work of clearing out surrounding islands in the Admiralties.

The western approaches to Lorengau on Manus were bombed and strafed by B-25's, flying as low as 40 feet over the dense jungle. Artillery units on Los Negros registered on enemy troop concentrations on the southwest tip of the island. Antitank guns and PT boats continued to disrupt Jap barge activity between Manus and Los Negros.

The following day, after combat patrols had reconnoitered the occupied enemy entrenchments and determined his front line in the area about 600 yards southwest of Papitalai, the 1st Squadron of the 5th Cavalry attacked with two troops abreast and the third in support. A heavy mortar and artillery barrage, lasting an hour and a half, preceded the attack.

The 5th found a brick wall awaiting the charge, but managed to pierce it in several places, and disposed their own lines at nightfall for pressing the attack immediately upon the arrival of daylight.

Naval fire on Pityilu Island continued throughout the day, while the field artillery loaded up its 105mm guns and proceeded to Hauwei Island.

The 1st Squadron, 5th Cavalry, was ordered to attack enemy positions on Hill 260 west of Papitalai. The advance was made along a narrow ridge covered with dense undergrowth, which limited the front of the advance to about 20 yards. The assault by a platoon of Troop "B," 5th Cavalry reached a point 15 yards in front of the enemy position, when Lieutenant Ralph Hill, the platoon leader, was killed. Lieutenant Swan then came forward and assumed command. After reorganizing the platoon, he continued the attack and neutralized the enemy position.

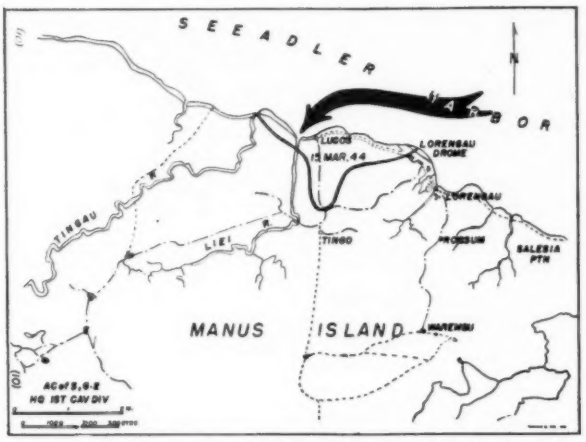
The First Day on Manus

On March 15 the dismounted 2d Cavalry Brigade combat team, under the personal direction of Brigadier General Verne D. Mudge, landed at Lugos Mission on northern Manus Island, in one of the most perfectly coördinated land, sea, and air attacks of the Pacific campaign. The split-second timing demonstrated in this operation steeped further glory on the 1st Cavalry Division, and the two historic regiments involved gained additional laurels. The 7th Cavalry Regiment, made famous under General Custer at the battle of the Little Big Horn, landed with the regiment that boasts more Congressional Medals of Honor than any other single unit in the United States Army, the 8th Cavalry. William Courtenay, London Sunday *Times* Correspondent who made the landing, called the attack west of Lorengau a ". . . brilliantly executed, daringly conceived operation. . . ."

Before dawn ominous clouds hovered over the eastern section of the Admiralties, and impending rains were indicated all around Seeadler Harbor. As the cavalry landing force left its base to move along the southern edge of the harbor in small amphibious craft, the sky began to clear, and by early morning expectant eyes turned skyward in search of our aircraft.

Tension mounted among the troops as they approached the scene of their first battle. Naval guns left the landing beach in shambles and shattered all possible enemy strong points covering the proposed landing sites. As the sun split the remaining clouds, formations of 5th Air Force B-25's, droning into sight from the east, winged their way toward the target. Wave upon wave of Mitchells, skimming up and down the beach and along the roads to Lorengau, dropped eggs and split tracers by the thousand. PT boats on either flank of the assault wave lurched toward the shore at full speed and opened their cannon on the beach.

As the maze of smoke from bombs, bullets, artillery fire and naval shells lifted, the assault wave, made up of the 8th Cavalry, hit the Lugos Mission beach and swarmed ashore. No immediate resistance was encountered. The landing forces quickly dispersed and set out on their advance to the east and Lorengau Airdrome—the only airstrip in the Admiralties in enemy hands.



Map 4. Arrow points to Lugos Mission, point of landings by 7th and 8th Cavalry west of Lorengau, March 15.

As the division commander observed the landing from a PT boat in Seeadler Harbor, he commented, "Our timing was a minute and a half off; we failed to take into account the heavy sea which retarded the landing craft as they turned toward the landing beach. Well, that's not too bad."

On the move eastward on the "No. 3 Road," running along the beach, the 1st Squadron of the 8th Cavalry met stiff opposition from enemy pillboxes, but with support from strafing P-40's and heavy weapons, succeeded in pushing toward its objective—the Lorengau Airdrome and Village. (See map 5.)

The 2d Squadron of the 8th Cavalry landed and moved directly south of Lugos, then east along No. 1 road from the village of Tingo to Lorengau. Temporarily held up by heavy mortar fire, the squadron dug in for the night under enemy fire at the Tingo road junction.

Meanwhile, the 5th Cavalry was entangled in hand-to-hand fighting and thick jungle undergrowth on Los Negros as the Jap staged another frantic counter-attack in an effort to smash the 1st Squadron's left flank. Enemy machine guns and rifles were firing at 10 and 15 yard ranges, but the counterattack was easily beaten off—in fact the troops were beginning to relish these attacks. It was an easier way to kill Japs than to dig them out of bunkers.

Back on the Lorengau strip harassing naval gunfire lasted all through the night. The enemy got very little sleep and most certainly did not enjoy his breakfast. Anticipation of death at the hands of the fast-approaching force and the screaming, nerve racking, 5-inch shells pouring into his dugouts at regular intervals were not conducive to his vaunted serenity.

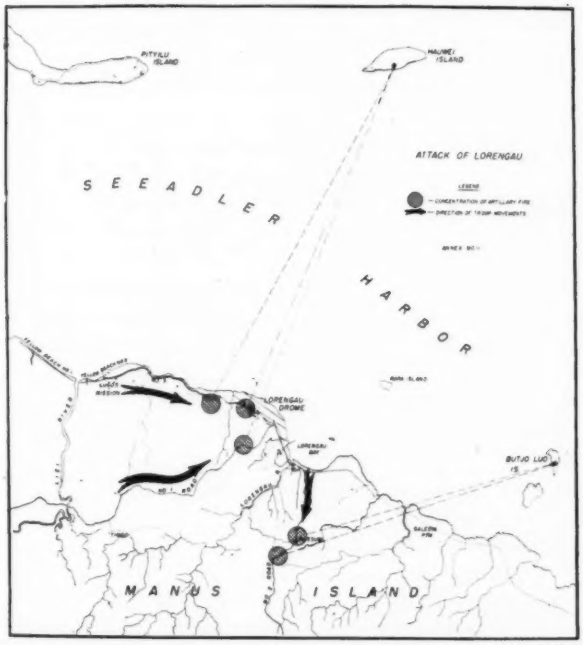
For the second time the Japanese were outsmarted in trying to anticipate what the cavalrymen would do. As the troops advanced east on Manus, it became more and more evident that the enemy had expected a landing in the immediate vicinity of the airdrome, for it was there that he had established his prepared defenses. Too late, he found it necessary to do a left face and reorganize his defensive system to meet the oncoming massacre, and his time was running out.

The use of artillery in the occupation of Manus Island was outstanding in its proper tactical employment. The artillery commander had selected ideal gun positions from which to deliver supporting fire for troops advancing along any of the main roads in the vicinity of Lorengau.

Prearranged targets all along the path of movement and thoroughly covering all possible enemy strong points were pinpointed on maps and given to the ground troops and the artillery. As our attacking forces met resistance from bunkers, a call for fire on the enemy's position merely required a brief "Target No. ——" and in a few seconds a "boom" and a devastating barrage would come down on the target. It was the type of artillery support that one reads about in the field manuals.

Without fear of being trite, it is possible to say that on this day the Nips truly received a large dose of their own medicine. Two valuable pieces of equipment had been captured. One was a pair of the finest type of 20-power binoculars. The other a 5″ naval gun emplaced on Hauwei Island together with a goodly supply of ammunition. The division artillery commander set up the binoculars on their stand in Hauwei and from them was able to supplement with great accuracy the sensings of the air and forward ground observers.

Meanwhile, a squad from the field artillery got to work on the naval gun. They soon had the brass ring, through which the barrel moves in recoil and counter-



Map 5. Artillery from Hauwei and Butjo Luo, secured Mar. 13, softened strategic points of Lorengau and Ossum.

recoil, repaired, filled the recoil mechanism with a mixture of light oil, glycerine, and kerosene, tested emplacement and were ready to fire. The gun sight had been damaged beyond repair, so the laying was accomplished. The initial target selected was a reported Japanese dump area on Salesia Plantation. The air observer was alerted and soon over the air came the voice of the battalion commander, "No. 1 on the way, range 2,000 cherry blossoms—watch it when it goes." The cannoneers soon had the gun calibrated, and thereafter it was used in support of the attack on the Lorengau area and Manus Island and against the Japanese installations on Pityilu Island.

Lorengau Airdrome

Just after daybreak on the 16th the reinforced 1st Squadron of the 8th Cavalry attacked the Lorengau Airdrome, heavily defended by pillboxes and machine-gun nests. Having reached their jumping off point the previous night, they had dug in and planned the organized attack in detail.

Preceded by thundering artillery and mortar concentrations and supported by medium and light tanks, the attack was launched. Our forces encountered some of the stiffest opposition yet seen while advancing on the airfield. The Japs had constructed an unbelievable number of bunkers and automatic weapon emplacements for the close-in defense of the drome, and the cavalrymen advancing from the west flank had to reduce each and every one of them in turn. Heroic feats by individual soldiers in the charge on Lorengau seemed to be the order of the day rather than the exception, and through many incidents of personal heroism and sacrifice the squadron was able to advance.

Meanwhile the movement of the 2d Squadron of the 8th Cavalry on Number 1 Road to join forces with its counterpart was temporarily stymied by muggy jungle undergrowth, bad roads, and strong resistance along the track east of Tingo. An air-strike by Allied P-40's, operating from the now functional Momote Airfield on Los Negros, aided in reducing enemy opposition and paved the way for a sizable advance before nightfall.

The cleverly concealed machine-gun emplacements were indeed the work of a cunning and resourceful enemy. In a sense it was a graphic illustration of the well-defended road to Tokyo, but the rapid destruction of this short sector bode ill for the remaining defenders.

The third day following the landings on Manus, the troops moving along the Tingo-Lorengau trail joined elements of the 7th Cavalry, support echelon of the combat team, which took over the 8th Cavalry unit and pressed on toward Lorengau village. Many pillboxes were knocked out along the route, and by nightfall a concentrated attack secured the airdrome.

As the attack gathered momentum, the troops forced a crossing on the Lorengau River near its mouth. Nightfall found the brigade astride the river, but the bridgehead on the east bank was well secured, and the troops dug in.

With the conclusion of the day's fighting, American troops had the one remaining enemy garrison in the Admiralties at their fingertips. The occupation of Lorengau drome shortened supply lines from Los Negros—now practically a "rear-area"—and operations designed to capture the township and destroy the very last Jap could get underway.

During the night of March 17-18 the 2d Squadron of the 8th Cavalry moved into position to deliver the final blow on Lorengau township. They held a commanding view of the town from a high ridge to the northwest.

Lorengau township and its small but excellent harbor are situated in a cup-shaped valley, surrounded by jungle-covered hills which rise to 400 feet. The defenses of the area—the most likely spot for a hostile landing from the Jap point of view—were sited to cover the shore line and its offshore approaches, and three roads entering the settlement from the east, south, and northwest.

The beach itself was heavily planted with naval demolition mines containing 20 pounds of black powder and detonated by a master switch located in a control bunker well up the hillside overlooking the beach. Approximately a hundred yards in rear of the beach a series of rifle pits and gun emplacements were constructed in the side of a dike which paralleled the shore. On the hills surrounding the harbor, beach, and town, approximately 12 heavy Jap bunkers, similar in construction to those previously encountered, were dug in to reinforce the beach defenses and give the position depth. Although very neatly camouflaged, a number of bunkers had been uncovered by our concentrated artillery and naval gunfire. The beach itself was thoroughly mined and covered with barbed wire, giving further evidence that this spot, rather than Lugos Mission, was the expected place for a landing.

The only approach to the township from the west required crossing of the Lorengau River, a low-flowing stream 120 feet wide and from 10 to 20 feet deep. Vigorous combat patrols pressed the enemy back into the hills overlooking the village, and permitted a more rapid advance of the attacking forces.

By afternoon small groups had successfully demolished every Jap bunker in the area and had either killed or driven off all organized enemy resistance. The regiment moved into the township for the night and sent Troop "E" down the road to Rossum, running south, to clear the way for the next attack. Patrols were also sent eastward to Salesia Plantation. Supported by rifles and machine guns, these patrols forced the Japs to abandon 7 bunkers. In their haste the Japs also left behind an antitank rifle and a 20mm machine gun in perfect operating conditions. The vacated bunkers were destroyed by naval demolition bombs, captured during the occupation of Lorengau.

Mounted Attack
In West Bataan—1942

***This story was told to me by a Filipino who, as an officer in the Philippine Army had been an aide to the commanding general of the division holding the west flank of the Bataan position. It was his mission to observe the fight in order to report it to his commander. The exact time and place he did not say; however, I believe that this incident happened in the area of Bagac, central West Bataan, in the latter part of January.*—Arthur K. Whitehead, Major, Cavalry.**

THE Jap infantry, working down the west coast of Bataan Province, had penetrated the line held by the U. S.-Filipino forces and occupied a barrio or village of nipa huts. This area, as are most other parts of the province, is covered by dense jungle practically impassable. Cutting through this jungle is one road broken here and there by clearings for nipa settlements. The Japs had penetrated one of these clearings.

Three times during the day Philippine Army infantry had tried to retake this barrio, the occupation of which was necessary to secure the holding of the line. Toward afternoon the Japs were receiving reinforcements and digging in. Something had to be done in a hurry. Attached to the Philippine infantry division was a troop of the 26th Cavalry (P.S.). The division commander ordered this cavalry troop to retake the barrio and reëstablish the line.

The officer's description of the position was this:

The highway ran north and south through the barrio. On each side of the highway, and surrounding the barrio clearing, was the jungle. Where the road entered the barrio, on the south side, the Philippine infantry troops had a road block; and, fringing the barrio in a crescent shape on the south side, they had cut paths into points where they had established observation posts and placed snipers. It is assumed that the cavalry commander, knowing that three attacks on foot had failed and seeing that the barrio clearing gave space for horses to move around, decided that it was worthwhile to try a mounted attack. The only practicable place to initiate this was from the point where the road entered the barrio.

The position of observation of the officer who related this story was at one of the sniper's posts overlooking the southern part of the barrio to the left of the road. He said that the first that he heard was the pounding of running horses. Then four horsemen abreast with drawn pistols came into view. They were already disappearing when another wave came in sight, followed by another, and another—until the whole troop had gone past. The Japs had not started firing at first, so he assumed that they were taken by complete surprise. When the Japs became alert, firing came from everywhere—some from positions close to the observer. He said groups of four horsemen, yelling and firing their pistols, would turn off the road and charge into places from which fire was coming. He saw Japs running frantically from the horses. Some of the cavalrymen dismounted, turned their horses loose, and fought on foot.

After the cavalry charge, Philippine infantry moved in, and my informant moved up with them. He said here and there were dead Japs and cavalrymen, and a few horses standing bleeding from wounds. When he was able to see the north edge of the barrio, he could discern cavalrymen on the ground, forming something of a line, firing up the road and into the jungle at the retreating Japs, who had been forced to withdraw in the face of the sudden and daring assault.

After the infantry moved in, they put up a road block at the north entrance of the road, dug in, cut fire lanes, and were able to hold the position, taken by the cavalrymen.

*(EDITOR'S NOTE: A similar story, reported by Captain John Wheeler and published in the March-April, 1943, issue of The CAVALRY JOURNAL, describes the Battle of Moron, about January 16th. It is possible that the two accounts are of the same action.

The author, Major Rigg, demonstrates the *djigitovka*. He is one of the few Americans who has mastered this game.

Individual Excellence

THE Cossacks place great stress on individual skill at arms and riding. It has been their experience in many wars that when outnumbered, their *individual* excellence has often made up for their numerical deficiency. Thus, much time is devoted to marksmanship training with rifle, tommy and machine gun. Antitank gunnery has received much greater stress since 1941; also trench mortars, which the cavalry adopted during this war; Cavalry units are now armed with both the 50 and 82mm mortars. The Cossacks concentrate on molding individuals into toughened, qualified soldiers by rigorous individual training. The *djigitovka* is an example of how Cossacks emphasize and train for individual skill.

The Djigitovka

A person cannot fully appreciate Cossack daring and aggressiveness until he has seen a *djigitovka*. This swift-moving, neck-risking, training-at-the-gallop is an old Cossack institution designed for individual training. By virtue of its spectacular quality the *djigitovka* is often presented as an exhibition. Originated by the Cossacks, the *djigitovka* is now a part of the training of all Red cavalrymen.

There are two types of *djigitovka*—the "free" and the "military"; the former is optional and is performed without full military equipment. The "free" *djigitovka* includes a great variety of Cossack stunts, whereas the "military" one is a prescribed obstacle course.

The military *djigitovka* is obligatory for all line Cossacks, and the course is normally run with combat equipment, less the rifle for one or two stunts. As a rule Cossacks begin training in the free *djigitovka* as boys, and by the time that they enter military service they are somewhat prepared for the obligatory mounted courses. To qualify in the military *djigitovka* a Cossack must be able to gallop down the field on a horse and pick up certain objects like a pistol, saber, money, etc. He must also be able to pick up a dismounted man, to make his horse lie down, to carry one and two "wounded men" off the field on his mount, and to jump off of his horse when it is at a dead run. The saber course (described later) is one part of the military *djigitovka*.

Unencumbered by full field equipment, the free *djigitovka* is an even rougher and more strenuous undertaking than its military counterpart. The object of this voluntary training (which, incidentally, is very popular among Cossacks) is to foster the competitive spirit and to develop further the Cossack's self confidence and mounted skill. Innumerable hazardous stunts are performed in this *djigitovka*. Jumps are taken by riders who either stand on the saddle or sit facing backwards on the horse. Other stunts involve jumping on and off running horses, changing from one to two and even three galloping horses, crawling down, under the belly and up into the saddle of a fast running mount, etc. Few horsemen can match the Cossacks in stunts such as jumping from side to side over a running animal while carrying a saber in the teeth, or placing a handkerchief on the ground and picking it up with the teeth while riding by at full speed. These and many other stunts require a well developed set of nerves in addition to mounted skill. A rider who miscalculates in attempting to pick up a handkerchief may easily upset his horse or receive a battered face if his judgment or timing is poor. Like our obstacle course, training in the *djigitovka* makes for physical hardening.

Some *djigitovka* stunts were originally created for military purposes. For example, riding standing up in

Part III — Training and Organization

RMY COSSACKS

by Major Robert B. Rigg, Cavalry

the saddle. Years back this became obligatory for all line Cossacks. On reconnaissance they were not allowed to sit in the saddle and ride over the crest of a hill. Instead the Cossacks trained their scouts to *stand* in the saddle and ride up the crest; the result was that a Cossack only exposed his head as he peered over a hill crest.

Because of the open steppe quality of so much of the Russian terrain Cossacks have always trained their horses to lie down so as to present a minimum target; some Cossacks can perform this stunt without dismounting and they mount while both horse and rider are on the ground before making the animal rise and gallop off. Many a Cossack who has lost his horse in combat has ridden short distances on the stirrups of two of his fellow horsemen riding abreast.

The combat usefulness of many Cossacks stunts is small, but the real value of the *djigitovka* is that it fosters aggressiveness, and creates daring, pugnacious soldiers.

Saber Training

The regular saber course consists of ten fence posts set upright about seven yards apart. Protruding from the top of these posts are fresh branches. The Cossack rides at full gallop down this row of posts and slashes at each one of these saplings. Spacing of these targets is such that the rider just barely has time to lift his arm from one downward stroke before making another one. Slowness, poor timing, or unskilful handling of the horse will cause several misses. First, the rider charges down the left side of the posts while swinging his saber to the right. Reversing this, he gallops down the right side and with the saber still in the right hand he swings to the left. The next time the horseman does the "weave" or "in-and-out ride" between each of the posts. This requires a series of fast, alternating strokes to left and to right—not to mention a deft handling of the horse. The author has witnessed Red cavalry competitions during which the horsemen have had no difficulty in cutting all branches, but the "in-and-out ride" was always the most difficult. In one exhibition a Cossack major demonstrated perfection in the use of the saber when with a blade in his teeth and one in each hand he rode the "weave" course; steering his horse with only his knees and body he succeeded in cleanly cutting every target. He was of course an exceptionally skilled rider.

In addition to the standard course, the Cossacks have a variety of special ones. Some of these are clay dummies for testing and developing the power of one's saber stroke. Sometimes the more skillful Cossacks use another method: A heavy rope is stretched waist high between two trees. The Cossack, rides a *blindfolded* horse straight at the taut rope barrier. As the animal cannot see the rope he will not attempt to jump it. Therefore, the rider must lean forward and cut the barrier with one stroke in time to avoid having the rope upset horse and rider. This sometimes proves to be a rather rough method of perfecting one's skill.

The Saber in World War II

Saber actions normally occur during raids, skirmishes, and small engagements. They are generally small actions involving less than a cavalry regiment. U. S. newspaper "accounts" of such actions are generalized and too often over-exaggerate these small combat incidents.

Saber actions are only successful under circumstances greatly favoring the cavalry. Once such an attack has begun, the shock action of a charging avalanche has a certain psychological effect on the enemy, especially if he is not too stubborn. The present day Cossack saber charge is the *final* demoralizing blow against an enemy already caught off guard and surprised, or disorganized and faltering.

Sabers are sometimes used when cavalry is following its own tanks. In the initial phases of such a charge the Cossacks use the tommy guns which are slung on their chests; they fire these guns until the clips are expended, then, shoving the muzzles down, they push the guns onto their backs and draw sabers.

Confused and disorganized enemy troops have suffered the most casualties from saber wielding Cossacks who are ever anxious to use the *shashka*.[1] By reason of this state of mind the Cossacks have been quick to capitalize on unexpected situations. Once they are at close grips with the enemy their dexterity with horse and saber can create violent manslaughter.

Night raids present opportunities for the use of the saber mounted because the saber does not endanger other cavalry personnel in close combat. Furthermore it is a silent weapon which does not serve to alert adjacent areas immediately. The pattern of night fighting often

[1]Russian for "saber."

***"The object of the* djigitovka *is to develop Cossack boldness, skill and daring. For that reason it is obligatory for every Cossack soldier."—* Old Cossack Military Regulations.**

Saber actions normally occur during raids, skirmishes and small engagements. Here Cossacks participate in a charge.

involves attacks on enemy occupied villages which are situated behind the enemy's main lines. By reason of such, these enemy troops will often be less careful in regard to local defense, and the Cossacks have had success in surprising many of these garrisons. Thus, as enemy troops have rushed out of buildings they have been sabered amid their running confusion of trying to organize some opposition to the attack.

In March 1944 on the Third Ukrainian Front the Russians surprised and attacked a German motorized column on a highway near the Ingulets River. The attack was climaxed when a large mass of mounted cavalrymen, with sabers drawn, rode down on the somewhat shot-up German column. A Soviet war correspondent who visited the scene very shortly after the battle said that he counted hundreds of enemy corpses that had been sabered in this battle. As it happened, this situation was favorable to the use of sabers—as against many others where blades could not be used.

Cossack successes with the saber—although they are minor achievements compared with their other accomplishments—have in part been due to the Cossack temperament and their pugnacious combat spirit.

Field Riding

Cossacks maintain that their type saddle is best suited for their purposes; it quite obviously affects their peculiar seat on a horse. The Cossack seat is well forward with considerable weight on the stirrups, and some observers comment that the Cossack saddle is so uncomfortable that one cannot sit any other way! The seat is progressively more forward with each increase of gait. At the gallop the inside of the rider's thighs are well against the thickly padded *pommel*, while the main weight of the body is in the stirrups.

Much as Cossacks dislike walking, they are taught to spare their animals by leading them over rough and snowy terrain where speed is not the dominating factor. Cossack commanders are taught to analyze carefully such difficult footings as vast plowed stretches, swamps, etc., and to modify their gaits, march tables and leading so as to preserve every bit of their animals' strength and endurance. Formerly, the Cossacks were taught to go around fences and to take ditches on an oblique, rather than jump these and other obstacles as U. S. Cavalry does. Cossacks of the old Imperial Army were inept and generally untrained in jumping. This was in marked contrast to their ability to do practically everything else on a horse. Today, however, obstacle jumping is stressed in all Red cavalry units.

Marches

The Red Army command expects a high degree of mobility from its cavalry, and the vastness of Russian terrain demands much in the way of long marches by military horsemen. Russian cavalry and Cossacks have proved that they can endure much in the way of combat-marching, but the Red Army does not try to match horsemen against mechanization, for each has its own rôle, speed and ranges.

Russian cavalry march procedure corresponds in general to that of U. S. cavalry. Their march tables are keyed to so many *versts* instead of *miles* per hour. Russian cavalrymen use the same system as U. S. cavalrymen in respect to alternating the walk and trot, although the Russians use the gallop more frequently. Night marches of 30 to 35 miles cross-country have not been uncommon in this war.

There are some forced marches of 70 miles in 24 hours on record, but where it can, the Russian cavalry chooses to conserve its animal strength. One Red cavalry colonel told the author that when his unit was on the front it made a series of forced marches of from 60 to 80 miles per day by the use of an alternate set of horses. The unit simply rode one group of animals as long as practicable, and then transferred men and equipment to the lead group and continued; the used mounts followed in rear of the unit. This system lessened the fire power of the regiment while on the march due to the additional horseholders, but it was practical for quickly moving the unit to another sector.

Discipline

In observing Red Army units the one item which has impressed the author most has been the discipline. It is not only excellent; it is consistent among all ranks. Other observers concur in this opinion.

Red Army achievements in battle have been due in no small part to this factor. As a part of the Red Army, the Cossacks have had to conform to this hard discipline, and they have been benefited accordingly.

Russian military discipline is achieved by methods common to most armies, but their system has its own peculiarities. The average American soldier would be greatly surprised at the penalties that the Red Army has for violations of orders, regulations and misconduct. A Russian soldier can be executed for a misdemeanor which under the U. S. system would only merit con-

finement. This is not to say that Russian discipline is built on fear, but the Soviets have reduced the number of courtmartial cases by severe penalties. The differences between nationalities, likewise, cause differences between military systems and methods of achieving the same goal. The Russian system differs from the American on this basis.

Red officers appear to be well respected for their professional knowledge and good military conduct.

Officers and Leadership

Strangely enough the Cossacks have never produced any outstanding number of great general officers, either today or in their past history.

Under the Tsars Cossack units were often recruited and officered by men of the same community. There was a certain military disadvantage to this because many officers were relatives or intimate friends of the men under them. The Red Army has corrected this. According to the Russian officers with whom the author has talked, a substantial portion of the officers of present day Cossack units are *non-Cossack* in origin. Cossack soldiers are promoted to officer rank in the field when they can demonstrate their ability in combat for such positions. Thirty years ago this was not a regular practice in the Russian Army. Cossack men, NCOs and others not in combat can also qualify for officer training; in peacetime they were required to have at least a secondary school education in order to go to officer schools.

Cossack Strength

Numerically speaking the Cossacks represent a very small portion of the U.S.S.R.'s population. For their numbers, however, they provide a high ratio of excellent fighting men. Most is heard about the Don and Kuban Cossacks because they are the largest Cossack groups. Based on previous proportions and a nominal amount of present day information, the Don Cossacks furnish about 35% of the *total Cossack* armed strength, while the Kubans provide roughly 20%. The Terek and Orenburg Cossacks contribute about 10% each. The remaining 25% is made up of Ural, Siberian, Amur, Astrakhan and other small Cossack groups.

When the war began, the Red Army had about 40 divisions of cavalry. This has since been increased to an estimated total of about 65 divisions. Details are lacking on the exact total of Red cavalry strength, and the ratio of Cossack units to that total. However, a conservative estimate based on what is known, is that the Cossacks make up 30 to 36% of the total Red cavalry strength—or an equivalent of from 20 to 24 cavalry divisions. Cossack regiments have always been scattered through cavalry divisions in the Russian Armies. This practice is in vogue today, with the result that there are some all-Cossack divisions, but a great many more regular cavalry divisions contain both Cossack and non-Cossack regiments.

By reason of the fact that the regiment is the basic tactical unit of the Cossacks, it is well to examine its structure.

The Soviet Cossack Regiment

Since the 1940 Tables of Organization were announced the Red Army has, for security reasons, kept details of unit organizations secret. From all indications however, the basic structure of the cavalry regiment has remained essentially the same since 1940, except that the firepower of the regiment has been increased.

The Cossack regiment consists of four saber squadrons and one machine-gun squadron; the latter is made up of platoon of *tachanki*.[2] The Russian squadron is roughly equivalent to the U. S. Army cavalry troop. In addition to the saber (rifle) and machine-gun squadrons there is a battery of 76mm field artillery guns which is attached to regimental headquarters. Since the war the AT fire power of the regiment has been increased to where there is a battery of 45mm AT guns with regimental headquarters. The regiment is completed by an 82mm trench mortar section plus engineer, veterinary, medical, antiaircraft (20mm), signal, and supply troops; the latter vary in size between 15 and 50 men depending on the type of troop.

The Cossack squadron is called *"sotnia,"* a Cossack term which literally means "100 men." Actually, today the Cossack *sotnia* contains about 140 men and 5 officers, and is divided into four troops of four sections each,

[2]Light horse-drawn carriages with MGs.

These Kuban Cossack antitank gunners are using the Soviet 45mm AT gun. This horse-drawn weapon, a standard cavalry AT piece, fires both AP and HE shells.

plus a squadron or *sotnia* headquarters. A captain commands the squadron.

In the Cossack regiment the machine-gun squadron is employed or used in much the same fashion as the U. S. machine-gun troop. The Cossack machine-gun squadron is slightly faster than U. S. cavalry machine-gun units; this is due to the Russian use of the *tachanki* which allows for a faster gallop than pack animals can muster. Soviet machine-gun units may be slightly more aggressive than are U. S. machine-gun units because the Russian machine guns are at all times in a ready-to-fire position.

The Red Cavalry machine gun squadron can operate as one unit, but normally it is broken up to support the rifle squadrons. The same is true of the regimental field artillery and antitank batteries; very often the battery is broken up so as to put a gun with each rifle squadron. When necessary, division artillery supplements regimental artillery.

The total regimental strength in men and officers is about 1200. Horse-drawn vehicles total about 130, while the number of motor vehicles is very small.

With all due respect to a very able correspondent, Mr. Cyrus L. Sulzberger, the author would like to point out that Mr. Sulzberger's statement in the July-August, 1943, CAVALRY JOURNAL to the effect that "The old cavalry, hampered by horse-drawn baggage trains, has been largely eliminated by the gradual introduction of motor transport," is not entirely correct. *Within the regiment,* transport is almost entirely wagons, and the reason for this is that regiments are often obliged to cross terrain not suited for motor transport. Imagine a Cossack regiment held up in rough muddy terrain because its motor vehicles cannot supply it. To avoid such a situation, the Cossack regiment still uses wagons. With division and corps, however, there is a higher proportion of motor transport.

DIVISIONS AND CORPS

In direct contrast with present U. S. cavalry, whose main rôle is reconnaissance, Soviet cavalry is organized into divisions and corps and employed on a mass scale in combat. Russian cavalry successes have in great part been due to the fact that it has been committed *in force*.

Red Cavalry divisions vary between three and four cavalry regiments plus a horse-drawn field artillery regiment which is always a part of the division. The FA regiment is divided into two groups and totals six batteries (76mm guns and 122mm howitzers). In addition to the division headquarters there is a squadron each of engineers and signalmen, plus a troop each of medical, AA, supply, and veterinary personnel. Prior to this war the division contained a mechanized regiment. A major general[3] normally commands the division, although occasionally a colonel is in temporary command.

The corps is the largest permanent cavalry organization in the Red Army. The cavalry corps is formed by three cavalry divisions, plus a minimum of one horse-drawn artillery division and a mechanized unit believed to be a regiment. A lieutenant general commands a corps. In the summer campaigns of 1944 Marshal Joseph Stalin cited no less than ten cavalry corps for outstanding action on the front. This totals about *thirty cavalry divisions,* and there were perhaps one or two other corps in the fighting which were not cited. It is generally conceded that the Red Army employs about 30 to 50% of its total strength on the front at all times, and these unit citations seem to bear this out.

About the largest all-Cossack organization is the division, although in a few corps the Cossacks dominate to the extent that these corps can be appropriately called "Cossack Corps." The following corps come under this latter condition:

Lt. General Issa Pliev's Kuban Cossack Cavalry Corps, which was cited for heroic and outstanding action in 1944 at Odessa (April), Baranovichi (July), Brest-Litovsk (July), Vilieka, Krasny, and Stolbtsy (July), and at Debretsen and near-by points in October.

Lt. General Gorshkov's Don Cossack Cavalry Corps, which received Marshal Stalin's citation in August, 1944, for outstanding action on the Second Ukrainian Front and again in October at Debretsen.

Lt. General Vladimir Kriukov's Cossack Cavalry Corps, which was cited in July, 1944, for conspicuous action in the Minsk area.

Lt. General S. V. Sokolov's Cossack (Kuban and Ural) Cavalry Corps cited by Marshal Stalin for actions at Rovno and Dubno in June, 1944.

Lt. General Baranov's Cossack Cavalry Corps, cited in July, 1944, for successful actions near Brodi Poritsk, Busk, Gorokhov and at other points.

TASK FORCES

In viewing the aforementioned organization of regiments, divisions and corps it should be borne in mind that the Cossacks are not necessarily bound by standard TOs in field operations. There is great flexibility in the Red Army for the creation of varied task forces or combat teams. The organizations previously described simply form the structures around which these teams are built to carry out special tasks. Engineers and other specialists are often attached to the cavalry and, in turn, cavalry is often placed in mutual support of other arms. The most regular combination is the "tank-cavalry combat team." Aircraft is of course a very important factor to military success, and air units are parts of these teams.

The fourth installment of Major Robert B. Rigg's extremely enlightening discourse on Red Army Cossacks, which will appear in the March-April issue of The CAVALRY JOURNAL, *will deal with the Tactics and Technique so successfully employed by Russian Cavalry in this war.*

[3]Major General is the lowest general officer rank in the Red Army.

German Cavalry

These souvenir pictures of German cavalry were recently sent from near the German border by Major General Charles H. Gerhardt, Commander, 29th Infantry Division.

Soviet Cavalry from the German Point of View*

After the first World War, as a result of the lessons learned in it, there followed a general dissolution or motorization of the cavalry in most of the armies. Only the eastern nations, Poland and Soviet Russia, retained relatively powerful cavalry formations. As we know, Poland had forty regiments of cavalry, and Soviet Russia has many corps and divisions.

While, in the campaign of 1939, small German cavalry formations did excellent work in reconnaissance and security service (even enemy batteries were captured in surprise attacks), the Polish Uhlans, true to their traditions, offered themselves up bravely in cavalry attacks, but to no avail. The Polish cavalry lacked heavy weapons, the necessary fire power, and collaboration between horse and motor. Also, there seems to have been no observation or combat aviation assigned to it.

On the basis of the experiences of 1939, the Soviet Russians reorganized and rearmed their cavalry and motorized its supply formations. The men received new "Simonov" automatic rifles and machine pistols. The number of machine guns was considerably increased and some of them mounted on light horse-drawn wagons. Particular attention was given to antitank defense.

In the campaign of 1941, Hungarian, German, and Rumanian cavalry were engaged in the Russian theater of operations, and it was often possible to employ them with success. Their fire power was increased, especially by means of antitank guns and antitank rifles. The latter were transported on pack horses.

The development of the motorized formations and of aviation, as well as the increasing fire power of the artillery and infantry, influenced the tactics of large cavalry formations on both sides. Every cavalry officer who went through the first World War on the eastern front or was for years garrisoned in Eastern Galicia, knows that at certain times and in certain places in the spring and fall and frequently in the winter when there is a great depth of snow, *only a mounted man is capable of getting about at all times.* This fact had also to be learned recently in the eastern theater of operations in the campaigns of 1941-1944. Hungarian cavalry formations, individual squadrons, were able to record fine accomplishments in the retreat battles in the abnormal temperatures of over forty degrees below zero.

Naturally, the cavalry in the east also fights dismounted. The horse serves more or less as a means of locomotion. However, smaller detachments and patrols are able to execute successful surprise attacks on enemy formations, especially in retreat, and break them up.

The Soviet Russians always employ their cavalry in great masses—divisions and corps—for the solution of secondary problems, security, etc.; for according to their view, cavalry formations which are scattered out, when worn down by the enemy, rapidly lose their striking power.

*Translated at the Command and General Staff School from a German article by Emmerich Suhay in *Pester Lloyd Abendblatt*, Budapest, Hungary, March 4, 1944.

Mobile Groups

by Colonel N. Denisov, Red Army

MOBILE groups have been widely employed in Soviet offensive operations in Hungary. Such units, comprised of tanks, cavalry, motorized infantry, and light artillery, are supported by IL-2's.

These mobile groups operate far behind enemy lines where team coördination with aircraft is very complicated. It is one thing for air power to deal a concentrated blow at the enemy when pilots can see the battleline clearly and are led to the target by radio locators from the ground, and quite another thing when pilots have to penetrate deep into enemy territory, find their supporting mobile groups—which are ever on the move—and simultaneously locate and attack objectives of most importance to the raiding parties of tanks, cavalry, or motorized infantry.

The situation is further complicated when pilots have to support small forces of these mobile detachments, as they dash forward into enemy defenses. The success of an operation of this kind depends mainly on a well organized system of communication between the commanders of the mobile detachments and the aerodromes located behind the frontlines. Initiative on the part of the pilots is likewise important.

Activities of a certain Stormovik unit operating in Hungary will serve as an illustration of the difficulties involved in this type of operation.

A medium sized mobile detachment, which broke into a populated locality and dislodged the German-Hungarian forces, met with considerable opposition when the enemy brought up lorried infantry and surrounded the locality. The officer commanding the Soviet mobile group was confronted with the problem of either

*By cable to THE CAVALRY JOURNAL from War Department, U.S.S.R., Moscow, November 26, 1944.

Soviet tanks smash enemy defenses on the right bank of the Danube at the approaches to Budapest. In the Red Army horses and armor are used extensively in what the Soviets term their Mobile Forces—the tank-cavalry team.

ps with Air in Hungary*

trying to hold the position or fight his way back to the main Russian force. Sizing up his possibilities and reckoning on the support of the airforce, he decided to try to hold.

The bold decision of the officer was radioed to headquarters and received approval of the general, who was struck with the idea of taking advantage of the possibility of routing the whole enemy group. The Germans, having brought their reserves to this particular area, were weakened in other sectors, and it was there that the general decided to strike. Time, however, was needed.

The weather forecast was none too promising. Low, overhanging clouds, heavy rain and mist seriously hampered air operations. The air officers, however, were confident of their crews and promised that they would fulfill the general's assignment. Half an hour later the first Stormovik detachment took to the air, and the lead-pilot led the group directly to the village where the fierce battle was in progress. The mobile group on the ground, surrounded on all sides by the enemy, was fighting back fiercely.

Looking down, the Stormovik leader saw a line of tracer bullets leading toward a woods and knew that the infantry was pointing out the target that it wanted knocked out first. The target, consisting of two field batteries, was attacked immediately. In two runs, the IL-2's released their bombs on the enemy guns, then followed with a strafing attack on the Germany infantry. The cannon and machine-gun fire forced the Germans to the ground and partially dispersed them. As the ammunition ran low, the leading pilot radioed the situation to headquarters and was told that a second group of IL-2's was about to take off. "Hold on, we'll give them hell," the pilot wrote on a slip of paper and threw in a pennant down to the village. Looking down, he saw Red Army soldiers of the surrounded mobile group wave their caps to the pilots.

For 4 days thereafter the Stormoviks helped the mobile force repel the German attacks. Not until the fifth day was the task completed. Then Soviet units, headed by the general who had foreseen the advantage in having the mobile group hold out, breached the enemy defenses and encircled the attacking enemy.

The general gave an order for a concerted assault, which was carried out simultaneously from both inside and outside the ring. By evening it was all over. The routed enemy hoisted a white flag. In that populated locality where fierce battles had raged for so many days, the general established his headquarters, while the mobile group, which had so successfully accomplished its task behind the enemy lines, proceeded onward with the main force.

Soviet planes head for an area near Budapest. Aircraft and Mobile Forces have been used in successful combination during the advance through Hungary to Budapest.

Horse-drawn artillery, used extensively with Red Army Mobile Forces, takes up new positions near Budapest.

Another interesting example of the coöperation between Stormoviks and ground forces occurred during a battle for a railway station in Hungary. A cavalry force sent to attack the station was only a few kilometers away when a reconnaissance flyer reported arrival of enemy troop trains at the station. Troops, tanks, and guns were being unloaded. Immediately the air unit commander concluded that the Germans were undoubtedly determined to hold the station and offer stubborn resistance. He ordered a few Stormovik groups into the air. Running in, they blasted the trains and blew up ammunition stores. Then the cavalrymen, taking advantage of the enemy's confusion, attacked and seized the station.

Artillery Cover for Shipping

by Major P. Danilov

A Soviet gun and crew are silhouetted by an enemy searchlight. Searchlights became prime targets for such crews.

WHEN the front moved to the coast and lines of communication by sea, Soviet coastal artillery was confronted by a number of new and altogether original problems calling for the closest possible collaboration with the fleet. These problems, it can be said, wrought a change in the very nature of this collaboration.

In the main, the Soviet batteries had to wage a struggle against the enemy shore batteries that were shelling Soviet shipping and bases. The counterbattery action of the Soviet artillery was designed to extinguish enemy searchlight installations, smash his pillboxes and disperse his concentrations of troops and equipment —in a word, not naval, but land objectives on the given sectors were the main targets of the fighting collaboration of the shore defenses.

This called for the working out of tactics of fire cover for shipping. How this was done is illustrated by the experience of one artillery unit upon which devolved the job of securing navigation for shipping on a route in direct proximity to the enemy's guns.

During the first phase of this action, Soviet gunners pursued purely defensive tactics. They opened up only after the enemy searchlights had gone into action, and after the enemy batteries had fired their first salvos. It was not long before the gun crews became expert at "getting" the enemy searchlights.

By concentrating their fire on the searchlights and batteries, using mainly flare shells, the Soviet gunners prevented the enemy from determining the exact location of vessels. This practice represented the initial tactical methods elaborated by this particular unit.

On one occasion a number of Soviet ships set out from their bases. Toward midnight, when their course lay off the enemy-held coast, with the aid of sound-finders, the Germans determined the approximate location of the convoy, and, thirsting for success, they turned on the searchlights so as to be able to fire from the darkness at brightly illuminated targets. But the Soviet gunners were on the alert. From an observation point the exact location of the enemy searchlights was transmitted to the gunners, who, with two shells, finished them off. The convoy proceeded on its way.

A little later, the Germans succeeded in getting another searchlight station going but had the mortification of seeing it share the same fate as its predecessor.

Seven times the enemy got lights going, and seven times Soviet gunners on land extinguished them. Only once, when the convoy was almost beyond the danger zone were the ships caught in the beams. The German guns opened up on their fast disappearing prey, and immediately the land batteries went into action. The enemy guns were quickly silenced, and for their exemplary conduct in this action, the Soviet gunners were mentioned in dispatches.

The immediate ascertaining of the targets (in this case the searchlights and batteries) and the opening of fire in good time is the basic condition for affording cover to ships on the move.

The tactics of the struggle against enemy batteries shelling coastwise shipping are not fixed and rigid. Changes will be caused by the dispositions of the enemy's guns, by the extent of the observation post network, the locality in which the enemy fire points are located and by the general situation on the front.

If the enemy batteries are within good view of the observation posts, then it is more advantageous to shell them by correcting the fire of each salvo and by shelling at a rate that prevents the enemy from causing damage to the ships. When the range has been found, the best method is to concentrate a massed fire on the target and then, by methodical shooting, to pin the gun crews to their shelters until the ships have passed the danger zone.

In operations designed to secure a safe passage for coastal shipping, the winning of time is a decisive factor. It follows, therefore, that the enemy must not be allowed to fire even a single shell. For this reason, battery commanders are allowed to use their own discretion in opening fire. On the sector on which the unit we have been discussing is operating, two or three special targets are allotted to the gun crews and, at the moment that the ships are passing these points, the guns go into action at the very first signs of enemy activity. Without previous permission from the senior officer, fire is opened against the floating batteries and coastal artillery which the Germans use specially for shelling the narrow parts of the fairway.

In a number of cases, during the 1943 campaign, this particular land battery changed from defensive to active tactics. After close and careful observation of the enemy's fire system, the gunners, prior to the passage of convoys, distributed the targets among themselves and subjected them to a thorough shelling.

Accurate shooting drove the German gun crews to their shelters and kept them there until the ships had got safely out of the danger zone. Reserve forces held in readiness to deal with new enemy fire positions, went into action on the instructions of the senior officer and at the call of the officer in charge of the convoy. Such tactics completely justified themselves.

In May and June of 1943, the men of Captain Shinelev's batteries and others, by this accurate shooting, prevented the enemy from discharging even a single shell at ships passing within a few miles of their positions. The artillery formations covering the sea communications retained the initiative in their hands and not only secured the safe passage of the ships but actually inflicted heavy losses on the enemy.

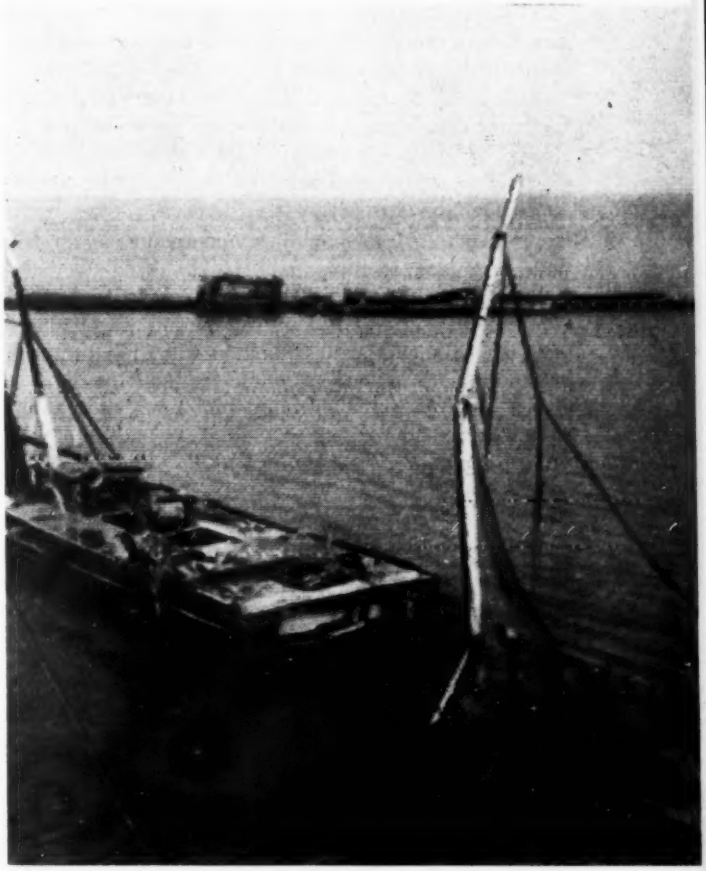
These "cover" operations in which the Soviet gunners held the initiative, demonstrated the effectiveness of offensive tactics. It does not automatically follow, however, that the offensive tactic must always be pursued. "Cover" tactics depend on the requirements of the given convoy, on the situation on any particular sector, relation of forces, on the season, and on the weather.

On moonlight nights when the enemy is bound to observe the ships, the tactics will assuredly be those employed of offense. This, of course, involves a considerable expenditure of ammunition, but it also means dictating your will to the enemy, causing him serious losses and securing a safe passage for the vessels.

When there is poor visibility, and the chances are that the enemy will have considerable difficulty in locating the ships, then it is possible to enjoy the luxury of the defense tactic—only opening fire when the enemy guns show signs of coming to life.

In other circumstances, it pays to combine both methods—to silence in the first place the more active of the enemy batteries shelling the narrow parts of the fairway and its approaches, put the enemy searchlight installations out of commission, and then concentrate only on the enemy guns endeavoring to get the range of the passing vessels. Having firmly mastered the tactics and methods of fire cover for ships and having achieved a high standard of gunnery, the artillery men of the Soviet coastal defenses have done remarkably well in securing free passage for ships and, simultaneously, have caused the enemy huge losses in manpower and equipment.

This German vessel was sunk in the harbor of Odessa by Soviet gunfire from a shore based battery of artillery.
Sovfoto



Maneuver Formations

For the Cavalry Division Artillery

by Colonel H. C. Demuth, FA

MANEUVER is only one of the problems which confronts the artilleryman of the cavalry division and, insofar as it affects the timely delivery of fire, it is most vital. In other days when the artillery occupied direct fire positions, the problem of speed was non-existent. Fire was delivered by single pieces, platoons, or single batteries against visible targets. The fire of a battalion was seldom used and was never massed as it is now known.

Direct fire positions today are suitable, at times, as against mechanization, but the improvement of methods and equipment makes the habitual occupation of these positions suicidal. Indirect fire positions are, therefore, the rule with the consequently slower, though more effective, methods and techniques. Massed fires with their tremendous effect are essential. They take time to prepare. However, the same necessity for speed still exists. Profitable, then, are devices that will save time before entry into action; since time saved here is spent in the preparation of fire.

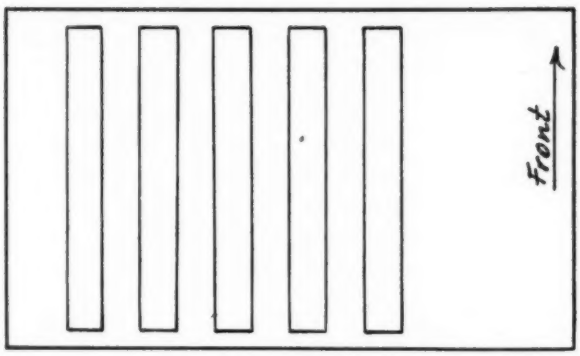
The spirit of General Hawkins' article, "Tactical Exercises and Maneuver Formations for a Cavalry Division," (CAVALRY JOURNAL, July-August 1943) is rapidity of maneuver and entry into action. This applies equally to the artillery of the division. Though not mentioned in artillery field manuals, maneuver formations expanded to include fire plans, both of which must be SOP (Standing Operations Procedure), can save much time which is so all important in preparing fire. Experience dictates their use. A simple code group, in conjunction with close liaison with the supported cavalry, must do initially as orders to the artillery. SOP attaches the horse battalions to their cavalry brigades except for special operations.

BATTALION MANEUVER FORMATIONS

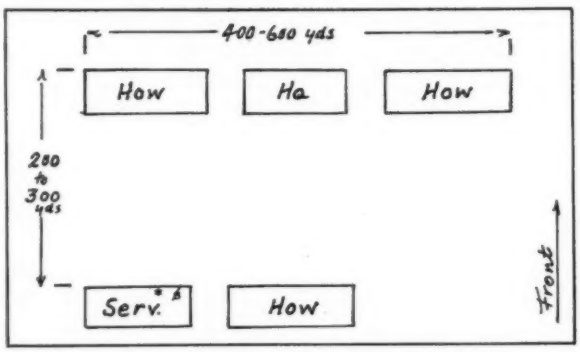
Only one formation is necessary to move a battalion across country in these rapid situations, but this formation must be such that trails can be dropped and fire opened immediately. Formation B (below) satisfies this requirement. However, the battalion commander will, for other purposes, need other formations.

Three maneuver formations, therefore, seem desirable for the artillery battalion. They are diagrammed below.

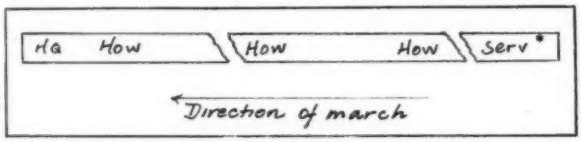
Formation A is used only to mass the battalion outside range of enemy air. Closed interval; order of batteries in line immaterial.



Formation A
The battalion in line. Batteries in section column.



Formation B
Battalion in two lines for cross-country. Batteries in line or double section line. Extended interval between sections.



Formation C
The battalion in section column—appropriate for marching on roads only. Interval decreases effect of air bombing.

Formation B, used for marching across country, lends itself to immediate action and to firing in any direction—necessary at times in modern warfare.

This interval in Formation C is such that if the situation calls for the battalion to drop trails and open fire the parallel sheaf is the open sheaf. While it saves but one simple calculation and one command on the part

of the battery commander, it gains valuable time. It also decreases the effect of air bombing.

These maneuver formations are adapted from those used by the 2d Bn, 82d Field Artillery (Horse), 1st Cavalry Division, during 1938-1940.

Rules for marching and changing from one formation to another are easily devised. Headquarters battery is the base unit; the guide, and leads the column because the battalion executive officer is with it and commands the battalion from there. Other batteries, changing gaits and direction as necessary to conform with headquarters battery, conform as prescribed by the battalion SOP.

These formations are appropriate for all battalions.

Maneuver Formations and Fire Plans for the Division Artillery

Maneuver formations for the division artillery as a whole are desirable. By the use of these, the division artillery commander places his artillery in the division formation and rapidly shifts the 105mm battalion by a simple radio group when necessary. His 105mm battalion and either of his horse battalions constitute the bulk of his artillery.

Three formations are necessary. (Different battalions should use different numbers, or letters, and those of the division artillery should be different from the battalions. This is in order to prevent execution if heard by another battalion.)

Formation 1: An order to the 105mm battalion to march, trailing the horse battalion of the first cavalry brigade if the division is in line of brigades, or the first brigade column if the division is in several columns.

Formation 2: An order to march between the rear of the brigades when the division is in line across country, or at the tail of center column if there is one.

Formation 3: The same as 1, except with the second cavalry brigade.

Fire Plans

Like maneuver formations, prearranged fire plans save much time in the transmission of orders. They are absolutely necessary, since it is seldom possible for the division artillery commander to see his battalion commanders after the division is set in motion. Visits by staff officers are, likewise, usually impracticable in the limited time prior to action.

Three plans are necessary to direct the fire of the division artillery properly. When any one of these plans is announced, it immediately releases the 105mm battalion from march formation.

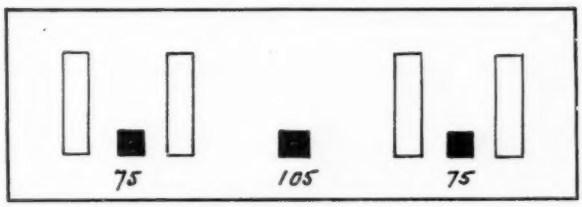
Plan X—The 105mm battalion reinforces the fires of the first (horse) battalion. (First cavalry brigade's horse artillery battalion.)

Plan Y—The 105mm battalion remains in general support of the division.

Plan Z—The 105mm battalion reinforces the fires of the second (horse) battalion. (Second cavalry brigade's horse artillery battalion.)

These plans are orders, and are announced immediately the scheme of maneuver of the division is known. Any one of them is an order to the battalion commanders to prepare for a definite line of action. Although the horse artillery battalion commanders will probably know the general scheme of maneuver by the time that this order is received from division artillery headquarters, it definitely assigns the 105mm battalion a mission. It orders the 105mm battalion into action. It notifies the horse artillery battalion commanders of the disposition of the 105s.

Example 1. The division commander assembles his senior commanders and tells them that he is going to march across country on a reconnaissance to ———. Line of brigades; first cavalry brigade on the right; the division on an extended front. Since the situation is indefinite, the division artillery commander will desire his 105mm battalion centrally located. He orders Formation 2.



Example 1.

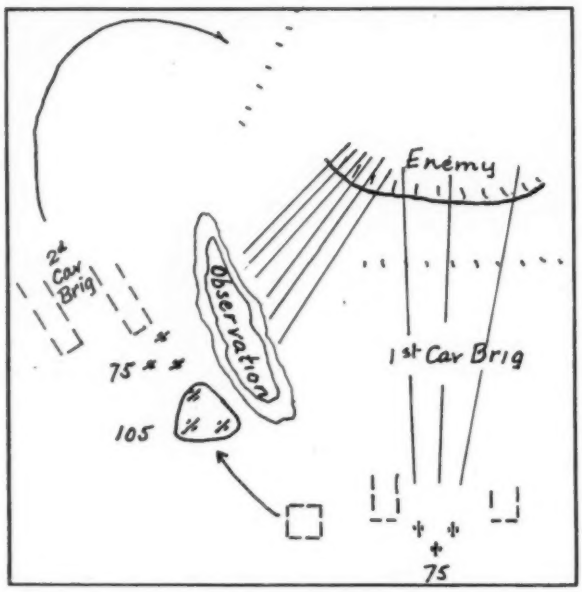
Example 2. When the enemy situation becomes clear and the division commander decides to envelop the enemy right, he orders Formation 3. This moves the 105mm battalion to the vicinity of the horse artillery battalion of the second cavalry brigade. He also orders Plan Z, for firing.

By this movement of the 105mm battalion, *prior to action,* the commander saves time by shortening communications with the reinforced battalion. This facilitates fire direction. He thus supports the main effort with the mass of his fire.

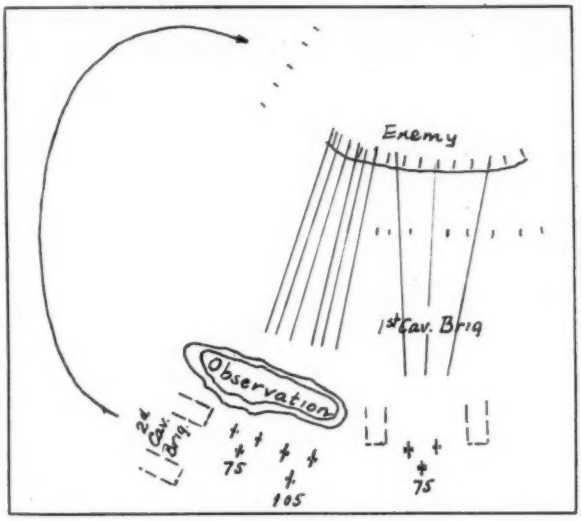
In no sense must the maneuver formation be construed as rigidly fixing the artillery battalions to a particular column or piece of ground once action is imminent. Only by allowing the battalion commanders great latitude and freedom of action, within the frame work of common sense, can cavalry be supported properly.

The preceding and following illustrations show how the battalion commanders may be influenced in choice of positions by terrain.

If the division commander adopts a standard formation for some special purpose such as, "delaying action against strong mechanization," an additional formation, or plan, can be added to announce this situation. All



Example 2-A.



Example 2-B.

in all, the above formations and plans, with the addition possibly of this one, seem adequate to cover all situations.

Artillery officers must have a proper tactical appreciation of and be imbued with the spirit of cavalry action. They must be able to select targets which will do the cavalry action the most good, for there is no time for minute directions from above.

Rapid entry into action and rapid accurate fire support are the ends to be attained. Practice and field exercises should be pointed to these ends. All personnel must be highly trained.

By the use of maneuver formations and plans which, if SOP and understood by all, can be transmitted as a short code groups to the battalions—the division artillery commander in these rapidly moving situations initially employs his artillery to the best advantage of the division.

In other situations, when time and circumstances permit, the more orthodox methods of engaging the artillery are employed.

Tactical Lessons and Maneuver Formations

IN ORDER that the division, and any of its component units, can be handled quickly and with greatest mobility, each unit must have a number of set formations that can be understood by all in a few established words, which become common language to everybody without the necessity of describing them in detail every time an order is issued or reference is made to them in instruction or conversation.

Except when the division, or any smaller unit, is marching in route-order in protected or safe areas (even safe from airplane attack), it does not march on roads. It must be able to move across country in any direction—forward or backward, left, right, or toward any ground feature or point of the compass—merely by the issue of a few simple words of command or brief vocal or written messages. These set formations enable such movements to be started almost instantly.

Aside from route marches, the division has to understand only a few set formations which are named "Maneuver Formations." These Maneuver Formations are practically deployed formations, either as foragers or lines of squads or platoons. No unit larger than a platoon is in close order. They are convenient for cross-country movement, for dispersed defense against air attack, artillery fire or small arms fire, and for quick dispositions of all units for combat.

By utilizing the four Maneuver Formations of the division, the commander can issue quickly, by voice to his commanders, or by message or radio, his brief orders for the direction of march—the Maneuver Formation No. 1, 2, 3 or 4—and the rate of march. Thus, it is like giving drill commands to a small unit. The division can accommodate itself to the terrain, change direction or formation or gait, and immediately be ready for combat of any kind in a very short time.

In daytime, cross-country movement is made easier and safer. At night, the columns must be condensed in the manner of route order marches, although they must be across country.—Brigadier General H. S. Hawkins, THE CAVALRY JOURNAL, July-August, 1943.

Artillery with Reconnaissance

*by Captain James P. Barry**

CAN reconnaissance units use artillery fire? How often does a reconnaissance unit see a juicy enemy installation that it cannot engage without neglecting its mission? Artillery fire may be brought on the enemy installation while the reconnaissance party sits quietly off to one side, unobserved. How often, on the other hand, does a reconnaissance unit have to fight for information? A few well-placed artillery concentrations would be welcome then, too.

Artillery observers may accompany reconnaissance units, but only under unusual conditions. Usually the reconnaissance trooper who needs artillery fire must adjust it himself. The job is simple, once he knows the method.

The target must be within range of friendly artillery. Some prior arrangements must be made for communication, such as having a radio vehicle at the CP of the supporting artillery. Infantry division artillery CPs are normally close enough to division CPs so that the radio vehicle which the reconnaissance troop keeps at division may move to the artillery CP with little delay when artillery fire is wanted, or an additional direct line may be laid from one CP to the other. Reconnaissance units operating with other types of division, or with corps, in which the CPs are some distance apart, are large enough to furnish an additional radio vehicle to their artillery without great difficulty.

When the reconnaissance unit finds something that warrants artillery fire, it sends back a message describing the target and gives the position as accurately as possible, preferably by coördinates, in the following form: "Enemy troop concentration; map coördinates 985.1–345.3; request artillery fire; will adjust." The "will adjust" means that the observer will stay in position to observe and adjust the fire. Such messages are always sent in the clear, as are the sensings which follow them.

The radio operator who is stationed at the artillery CP gives the message to the artillery, and then stands by. The artillery will tell him how many guns are to be fired in adjustment (probably a battery of 4 or 6 guns) and how many battalions will be fired for effect, when the adjustment is complete. He should relay this information to the observer. Just before the guns fire, the operator will be given the message, "On the way." He should send it to the observer immediately, to alert him.

If the position of the target was reported accurately, the first shell bursts should be in sight, or at least in hearing, within a few hundred yards of it, say 400 to the left of it, and 200 over it. In making such sensings, the observer must remember to make them from the viewpoint of the guns. Four hundred left means left of an imaginary line joining guns and target, 200 over means 200 yards beyond the target from the guns.

In artillery firing an effort should be made to get a bracket. About 200 yards should be added to the first sensing for both range and deflection, unless the bursts are very close. That being the method, this sensing would be reported to the artillery as, "600 left, 400 over." If the observer estimated the distances correctly, the next bursts should land 200 right and 200 short.

After those sensings are reported, adjustment should be continued until the bursts are within 50 yards of the target. Adjustment is then complete. The 50 yard sensing should be reported and fire for effect requested. It is necessary that the observer hit the target, though, for when the message is sent back, "50 short; fire for effect," the fires of all available artillery battalions will be brought to bear on it. A 105mm shell costs 18 dollars. That is one twelfth of the ammunition expended when a light battalion fires once, and that is probably the smallest thing that will be shot. That cost, of course, takes no account of the transport and personnel problems involved in getting artillery ammunition, which may make it infinitely more valuable.

When fire is first requested, if for any reason coördinates cannot be used, the position should be given by reference to some obvious landmark: "Water tower in Sened station is 800 left, 200 over; enemy tanks assembling; will adjust." Any system that will definitely indicate the position of the target will do the job; a thrust line can be used if the artillery knows the basis for it.

In a fluid, rapidly moving situation, when there is a great deal of gunfire, or in jungle fighting, it may be very difficult to determine the position of the friendly batteries which are furnishing fire. It may not be possible to decide what is right or left, and what is over or short. In that case, a compass should be used for directions, and such sensings as, "600 north, 200 west, sent back. Sensings, telling where the bursts land in relation to the target should be sent. The observer should not try to tell the guns what direction to shift, as he would with other weapons. If he does, he will get exactly the opposite of what he wants. If he has trouble in adjusting the fire, he should adjust either range or deflection until it is correct, then adjust the other element; at times that simplifies the matter considerably.

In some situations the artillery may furnish time fire, which is extremely effective against personnel, even personnel dug in. If the artillery does, they will say so. If time fire is wanted it should be requested. Though time fire is deadly against personnel, buttoned-up tanks may move through it unhindered; crews of antitank weapons can be destroyed or kept in their holes by it while tanks advance.

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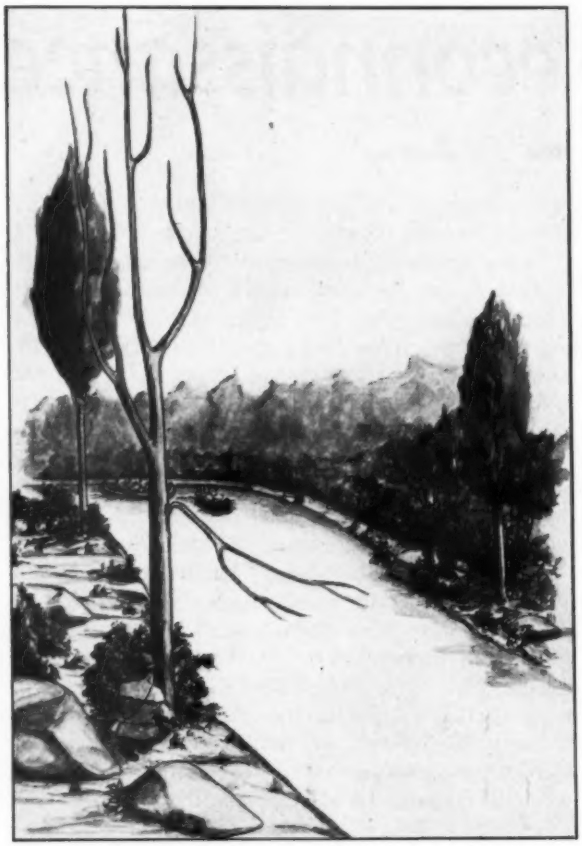
*Hq., 881st FA Bn.



Scouting a

Regulations of Rogers' Rang--ex and Indian War--present fu me naissance patrols today, part lar

THE old adage that history repeats itself is applicable to principles of warfare. Basic military tenets repeat themselves from one war to another, from one century to the next. Pertinent are the principles of scouting and patrolling which have remained unchanged for centuries – despite revolutionary changes in weapons and techniques of modern warfare.

Amazingly similar parallels can be drawn between present day scouting doctrines and those of military forces fighting centuries ago. An outstanding example of this is the regulations for Rogers' Rangers of the early 18th Century, which closely correspond to the rules laid down for patrols today—the modern American Rangers. In no way do they differ; they only serve to reaffirm basic principles of scouting that will always prevail.

Rogers' Rangers was a force of militia conceived and nurtured in this country by Robert Rogers during the Seven Years War from 1756 to 1763. Made up of frontiersmen, trained to fight the French and Indians, they incurred a large reputation for their successful military accomplishments and indomitable courage and endurance. Adopting Indian tactics, the Rangers were a sort of magnified combat-reconnaissance patrol. They distinguished themselves in campaigns around Lake George, Quebec, Montreal and Detroit. Aside from the fine caliber of leadership and men, the secret of the Rangers was in their training and methods of fighting. Based on sound principles, their methods are the same that scouts and patrols should use today.

"Rogers' Rangers" immortalized in *Northwest Passage* by Kenneth Roberts and a movie by the same name, trained and fought under the following regulations.[1]

Inspections.

> "All Rangers are to be subject to the rules and articles of War: to appear at roll call every evening on their own parade, equipped, each with a firelock, sixty rounds of powder and ball, and a hatchet, at which time an officer from each company is to inspect the same, to see they are in order so as to be ready on an emergency to march at a minute's warning; and before they are dismissed, the necessary guards are to be draughted, and scouts for the next day appointed."

Here is typified the emphasis placed on patrol inspection today. Equipment is checked with regard to noisiness, appearance, and suitability. Nothing that will give the patrol away is permitted—loose mess kits, rattling canteens, dog tags, or loose change. Camouflage principles are applied in keeping the equipment and clothing concealed from enemy eyes. Darkening with paint, dirt or grease eliminates the danger of light reflection. Arms—rifles, tommy guns, or automatic rifles are tested. Preparation, as with the Rangers, is still a keynote of all patrolling—preparation in knowing the mission, the terrain and the enemy before starting out on the patrol; preparation in being ready for any emergency that may arise.

Intervals and Distances.

> "Whenever you are ordered to the enemies' forts or frontiers for discoveries, if your number be small, march in a single file, keeping at such a distance from each other as to prevent one shot from killing two men, sending one man or more forward, and the like on each side, at a distance of twenty yards from the main body, if the ground you march over will admit of it, to give the signal to the officer of the approach of the enemy, and of their number, etc."

The maintenance of proper intervals cannot be overemphasized. In bivouac, on the march, or on patrol it plays an equally important rôle. In training it must be

[1]Regulations of Rogers' Rangers extracted from "The Bulletin of the Fort Ticonderoga Museum," Volume VI, No. 1.

nd Patrolling—*Then and Now*

ge--expert scouts of the French
un mental principles for recon-
rt larly those in the Pacific area.

by Major Rex Applegate

drummed into the men time and time again, or else in combat it will be learned too late. It is human nature for men to bunch up—at obstacles, etc.—but they must be taught and they must learn to keep at such a distance from each other as to prevent "one shot from killing two men." Point and flank security must be maintained at all times, the use of a column formation is basic especially in dense woods. The formation must enable complete control.

"Scouts Out."

"Some time before you come to the place you would reconnoiter, make a stand, and send one or two men to whom you can confide, to look out the best ground for making your observation."

Scouts are sent out to reconnoiter dangerous points before the patrol is committed. The principle of "scouts out" is a basic one, and too often neglected. Failure may lead to the whole patrol being ambushed. Before the patrol is committed to a dangerous area, the patrol leader himself usually goes out to reconnoiter, but at all times the use of the scout must be constant.

Security.

"If you march in a large body of 300 or 400, with a design to attack the enemy, divide your party into three columns, each headed by a proper officer, and let those columns march in single files, the columns to the right and left keeping at twenty yards distance or more from that of the center, if the ground will admit, and let proper guards be kept in the front and rear, and suitable flanking parties at a due distance as before directed, with orders to halt on all eminences, to take a view of the surrounding ground, to prevent your being ambushed, and to notify the approach or retreat of the enemy, that proper dispositions may be made for attacking, defending, etc. And if the enemy approach on your front on level ground, form a front of your three columns or main body with the advanced guard, keeping out your flanking parties, as if you were marching under command of trusty officers, to prevent the enemy from pressing hard on either of your wings, or surrounding you, which is the usual method of the savages, if their number will admit of it, and be careful likewise to support and strengthen your rear guard."

Security at all times is another cardinal tenet. Flank and rear guards should guard against surprise both on the march and at the halt. Surprise is a very effective weapon, but security is just as effective a countermeasure. Too often patrols, careful to provide security during the advance, become lax and fail to provide all-round guards when they halt or when they are returning. Rear security is as important as security to the front and to the flanks, since patrols operate in enemy territory and the enemy is likely to appear from any direction.

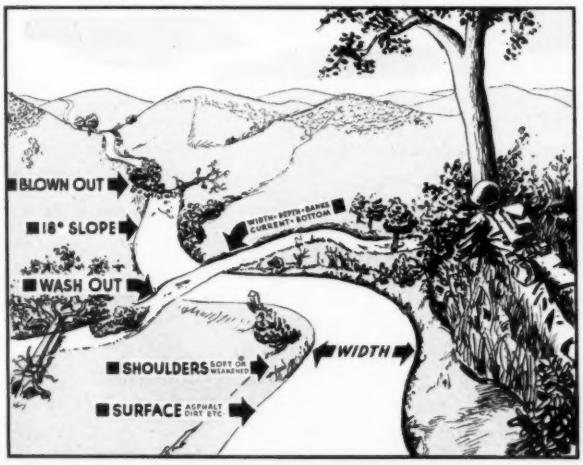
Movement by bounds continues to be a basis of patrol action. Frequent halts to determine the next bound and to listen for enemy sounds is an accepted patrol procedure. Keeping the flank guards well out lessens the chances of ambush or of being surrounded, "which is the usual method of the savages"—both modern and ancient.

Rest.

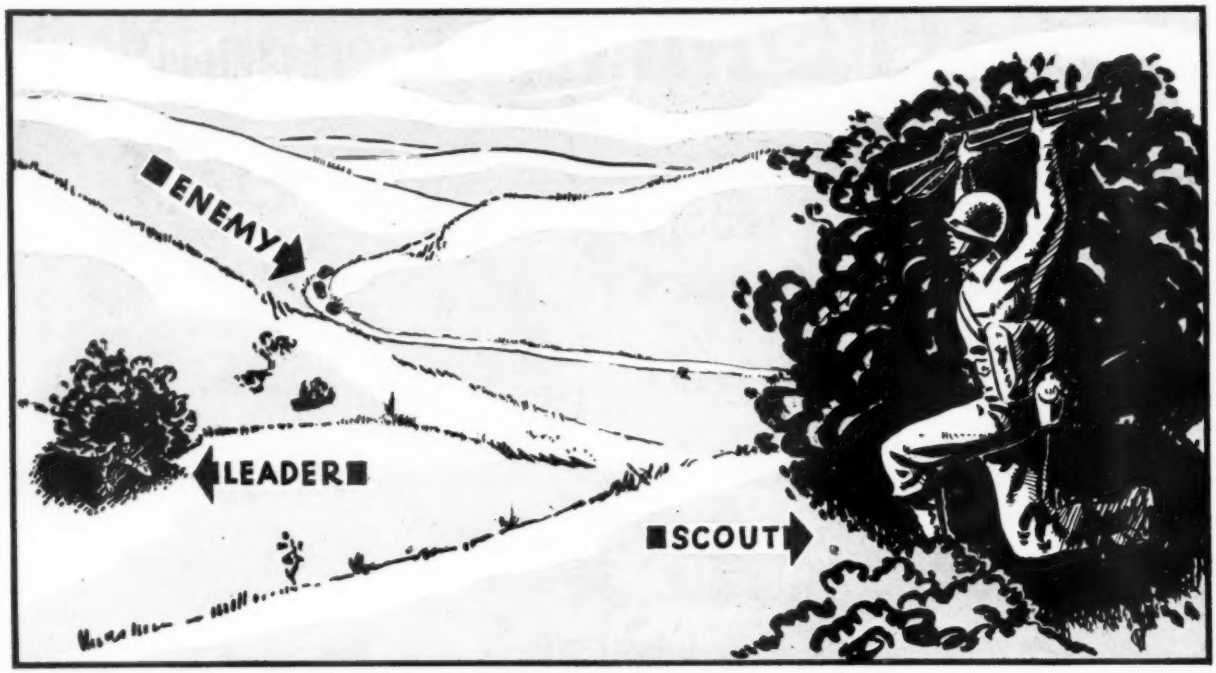
"When you stop for refreshment choose some spring or rivulet if you can, and dispose your party so as not to be surprised, posting proper guards and sentries at a due distance, and let a small party waylay the path you came in, lest the enemy should be pursuing."

Tracks and Bivouac Security.

"If you march over marshes or soft ground, change your position, and march abreast of each other to



What S2 wants to know about a Road.



Enemy sighted—use of scout must be constant.

prevent the enemy from tracking you (as they would do, if you marched in a single file) till you get over such ground, and then resume your former order, and march till it is quite dark before you encamp, which do, if possible, on a piece of ground that may afford your sentries the advantage of seeing or hearing the enemy some considerable distance, keeping one-half of your whole party awake alternately through the night."

Nothing gives away a scout's presence more unnecessarily than his tracks. He may camouflage himself, and he may move silently, but if he leaves footprints or beaten down brush he no longer conceals his presence from the enemy. Moving over sand, the scout should carefully smooth over his tracks, either with a branch or with leaves. Moving over fields, he is careful not to disturb twigs or bushes. Rogers' ruse of many tracks to cover up one is a good one only if a large force and not a patrol is advancing. Often soft ground cannot be avoided, and by marching abreast a force will make it difficult for the enemy to pick up one particular track. "All around" security at a halt must always be maintained by the patrol.

Sentries.

"When you encamp at night, fix your sentries in such a manner not to be relieved from the main body till morning, profound secrecy and silence being often of the greatest importance in these cases. Each sentry therefore, should consist of six men, two of those who must be constantly alert, and when relieved by their fellows, it should be done without noise; and in case those on duty see or hear anything, which alarms them, they are not to speak, but one of them is silently to retreat, and acquaint the commanding officer thereof, that proper dispositions may be made; and all occasional sentries should be fixed in like manner."

Security at night is important, but secrecy and silence often are even more so. Silence is the reconnaissance patrol watchword. A patrol is silent on the move; silent, at the halt. Sneak patrols are formed on the principle of silence. If the enemy cannot hear you, he will not have cause to look for you. Outguards at a halt must be as silent as a patrol on the move. Reliefs must be executed in silence. If sentries sight the enemy, they must continue to remain silent, for although you can see the enemy, he cannot always see you. The use of the Cossack type sentry post is still effective.

Alertness at Dawn.

"At the first dawn of day, wake your whole detachment, that being the time when the savages choose to fall upon their enemies, you should by all means be in readiness to receive them."

Alertness at dawn—that is stressed in all phases of combat. H-hours of today's battles often come at dawn. The enemy can attack at dawn, too. Preparation for an attack at dawn, whether one is expected or not, is required by all units in combat. Laxness at any time of day is inexcusable, but laxness at sundown or in the early daylight hours may be fatal. Patrol actions are often best performed at dawn or sunset.

Night Operations and Rendezvous.

"If you cannot satisfy yourself as to the enemy's number and strength from their fire, etc., conceal your boats at some distance, and ascertain their number by a reconnoitering party when they embark or or march, in the morning, marking the course they steer, etc., when you may pursue, ambush and attack them, or let them pass, as prudence shall direct you. In general, however, that you may not be discovered by the enemy on the lakes and rivers at a great distance, it is safest to lay by, with your boats and party concealed all day, without noise or show, and to pursue your intended route by night; and whether you go by land or water give out parole and countersigns, in order to know one another in the dark, and likewise appoint a station for every man to repair to, in case of any accident that may separate you."

A larger combat patrol is frequently used as a base of operations. Smaller sneak patrols are sent out from it to reconnoiter the enemy.

It is often advisable to lay up during the day and make all movement at night. Modern means of recognition involves the use of challenge, password, and reply so as to provide additional means of recognition.

Assembly points that are progressive as the patrol advances must always be selected.

Travel by Night.

"If you are to embark in canoes, battoes or otherwise, by water, choose the evening for the time of your embarkation, as you will then have the whole night before you to pass undiscovered by any parties of the enemy, on hills or other places, which command a prospect of the lake or river you are upon."

Travel by night when in enemy country. Doing so prevents his observation from being effective. Night patrolling missions are more frequent than day when contact has been established.

Contact.

"In paddling or rowing, give orders that the boat or canoe next the stern must wait for her, and the third for the second, and the fourth for the third, and so on, to prevent separation, and that you may be ready to assist each other in any emergency."

The procedure to maintain control and contact is the same as that used in night patrolling in dense undergrowth. Each man in the column formation can be made responsible for maintaining contact with the men behind him.

Observation.

"Appoint one man in each boat to look out for fires, on the adjacent shores, from the numbers and size of which you may form some judgment of the number that kindled them, and whether you are able to attack them or not."

Know your enemy and his organization so that when his dispositions are observed, his strength can be better determined. Maintain constant observation.

Encirclement.

"If you find the enemy encamped near the banks of a river or lake, which you imagine they will attempt to cross for their security upon being attacked, leave a detachment of your party on the opposite shore to receive them, while, with the remainder, you surprise them, having them between you and the lake or river."

Utilize the element of surprise and natural terrain features. Figure out the enemy's possible lines of action and act accordingly.

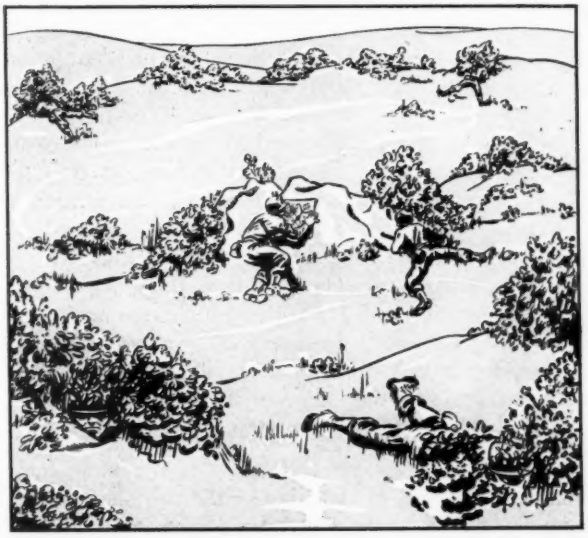
Numerical Deficiencies.

"If the enemy should be discovered by your detachments in the morning, and their numbers are superior to yours, and a victory doubtful, you should not attack them till the evening, as then they will not know your numbers, and if you are repulsed, your retreat will be favored by the darkness of the night."

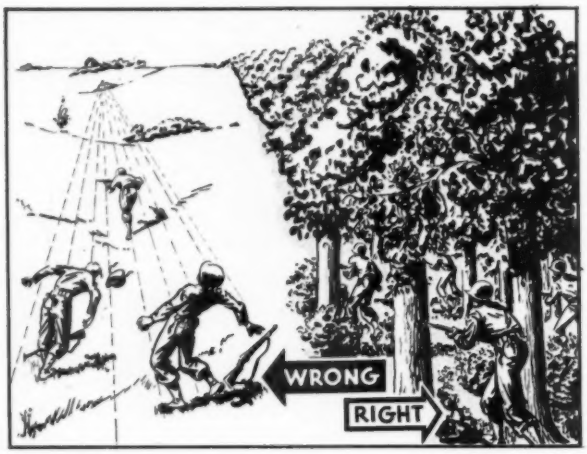
An attack at night, rather than during the day, always is advisable for a force inferior in numbers to the enemy. Night covers up numerical deficiencies and excessive firepower can make up for it. A combat patrol can do considerable damage at night to a large unit despite its smaller size. Should the attack be repulsed, again night favors a more successful withdrawal.

Dispersion.

"If the enemy is so superior that you are in danger of being surrounded by them, let the whole body



Security at the halt—must provide all around protection.



In daytime, utilize cover.

disperse, and every one take a different road to the place of rendezvous appointed for that evening, which must every morning be altered and the whole party, or as many of them as possible get together, after any separation that may happen in the day; but if you should happen to be actually surrounded, form yourselves into a square, or if in the woods, a circle is best, and if possible make a stand till the darkness of the night favors your escape."

Sneak patrol members should be instructed to disperse in the event of ambush. Each man moves away individually, meeting at a prearranged assembly point. Progressive rendezvous points are designated along the route of march to cope with any situation that may arise.

Fire and Movement.

"If you are obliged to receive the enemy's fire, fall, or squat down, till it is over, then rise and discharge at them. If their main body is equal to yours, be careful to support and strengthen your flanking parties to make them equal to theirs, that if possible you may repulse them to their main body, in which case push upon them with the greatest resolution with equal force in each flank and in the center, observing to keep at due distance from each other, and advance from tree to tree, with one-half of the party before the other ten or twelve yards. If the enemy push upon you, let your front fire and fall down, and then let your rear advance through them and do likewise, by which time those who before were in front will be ready to discharge again, and repeat the same alternately as the occasion shall require; by this means you will keep up such a constant fire, that the enemy will not be able easily to break your order, or gain your ground."

Fire and movement still serve as the basis for a tactical advance. Even the smallest units—squads—employ the principle. One squad takes cover and engages the enemy with fire while the other squad maneuvers to the enemy's flank to get enfilade fire or to take the enemy by surprise.

Surprise Attacks.

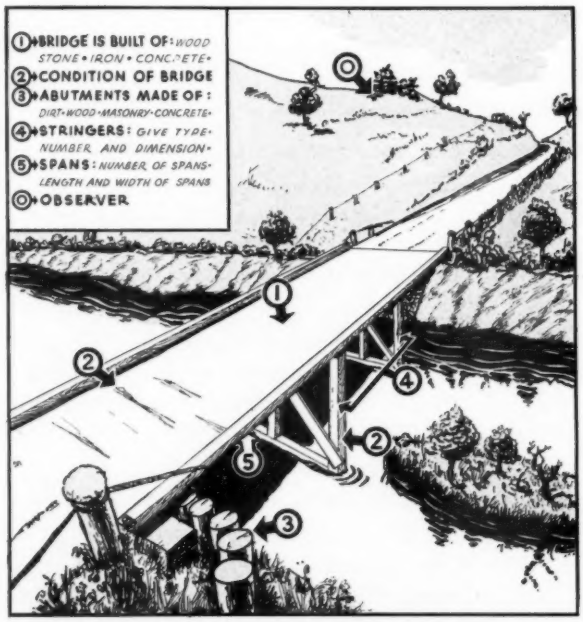
"If your rear is attacked, the main body and flankers must face about to the right and left, as occasion shall require, and form themselves to oppose the enemy as before directed; and the same method must be observed, if attacked in either of your flanks, which means you will always make a rear of one of your flankguards."

This regulation can be interpreted in present-day light to mean that the patrol must be ever on the alert and watch for surprise attacks, patricularly from the rear. Patrols must be mobile and flexible enough to be able to protect themselves from an attack from any direction.

Withholding Fire.

"In general, when pushed upon by the enemy, reserve your fire till they approach very near, which will then put them into the greatest surprise and consternation, and give you an opportunity of rushing upon them with your hatchets and cutlasses to the better advantage."

The practice of withholding fire until the enemy approaches very close is an old one. The command "Don't shoot until you see the whites of their eyes" has echoed through all wars since. This principle is equally applicable today. An enemy patrol is more effectively eliminated and the element of surprise is stronger in an ambush if the enemy is engaged at close quarters.


1 BRIDGE IS BUILT OF: WOOD • STONE • IRON • CONCRETE •
2 CONDITION OF BRIDGE
3 ABUTMENTS MADE OF: DIRT • WOOD • MASONRY • CONCRETE •
4 STRINGERS: GIVE TYPE • NUMBER AND DIMENSION •
5 SPANS: NUMBER OF SPANS • LENGTH AND WIDTH OF SPANS
OBSERVER

What a good scout should note about a bridge.

Retreat.

"If you are obliged to retreat, let the front of your whole party fire and fall back, till the rear hath done the same, making for the best ground you can; by this means you will oblige the enemy to pursue you, if they do it at all, in the face of constant fire."

If a retrograde movement is unavoidable, a delaying action should be undertaken. Delay the enemy by smoke, fire, etc., while the main body makes an orderly retreat. "Oblige the enemy to pursue you *in the face of a constant fire.*"

Terrain.

"If you determine to rally after a retreat, in order to make a fresh stand against the enemy, by all means endeavor to do it on the most rising ground you come at, which will give you greatly the advantage in the point of situation, and enable you to repulse superior numbers."

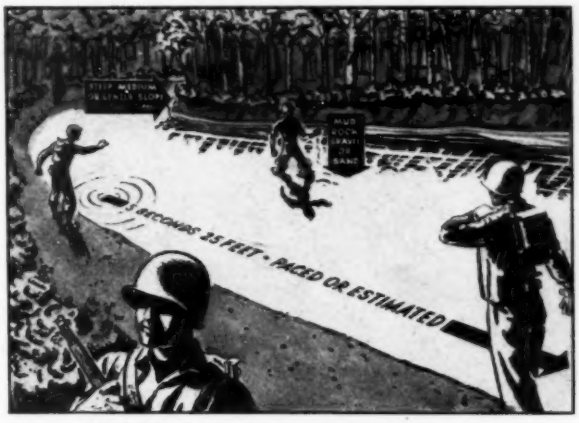
Upon the proper use of terrain depends the success of a patrol. All patrol members must know the terrain and how to use it. The effectiveness of Rogers' Rangers was based on such an understanding. They knew that a force which could locate itself on commanding ground had a superiority, for both firefighting and observation, and they knew how to fit themselves into the terrain in order to achieve such a position. They understood the lessons illustrated at Cassino and elsewhere—namely, that a force, inferior numerically, but well entrenched on a commanding piece of terrain can repulse a larger attacking force.

Enemy Counterattacks.

"If you oblige the enemy to retreat, be careful in your pursuit of them, to keep out your flanking parties, and prevent them from gaining eminences, or rising grounds, in which case they would perhaps be able to rally and repulse you in their turn."

To be ever alert for enemy counterattacks is as much a requisite now as it ever was. Counterattack is the basis of German defensive tactics. The capture of a German stronghold inevitably means a counterattack, and it must be strongly guarded against. Gaining ground from the enemy means only temporary victory unless the attacking forces can throw up a defense as strong at the attack. Combat-reconnaissance patrol must understand such tactics.

Alleviation of the danger can be enhanced by always maintaining contact with the enemy. Just as the Rangers kept contact with the Indians, so patrols today must always maintain contact with the forces of the Germans or the Japs. The enemy must be kept in visual view by forward elements—both in the attack and in the defense—otherwise the patrol is subject to surprise, and less able to anticipate or take precautions.



What S2 wants to know about a stream.

Prisoners and Route of Return.

"If you have the good fortune to take any prisoners, keep them separate, till they are examined, and in your return take a different route from that in which you went out, that you may the better discover any party in your rear and have an opportunity, if their strength be superior to yours, to alter your course, or disperse, as circumstances may require."

Two important principles are mentioned here. Prisoners must immediately be segregated. Interrogation is facilitated by keeping them apart, otherwise the officers and noncoms will tip off the privates as to what and what not to say. Combat-reconnaissance patrols may take prisoners, and no or little information will be forthcoming if prisoners are allowed to mix and talk to one another.

The second principle is that of patrols returning by a different route. Patrol experience has shown that if the enemy once discovers that patrols are in the habit of using the same approach, he will lay an ambush on it. Returning by a different route serves the added purpose of permitting the patrol to seek out other enemy dispositions and to acquire better knowledge of terrain.

Return.

"When you return from a scout and come near our forts, avoid the usual roads, and avenues thereto, lest the enemy should have headed you, and lay in ambush to receive you, when almost exhausted by fatigue."

Here again is the principle of avoiding traveled routes, and returning by a different route from the route of approach.

Rivers.

"If on your return, you have to cross rivers, avoid the usual fords as much as possible, lest the enemy should have discovered, and be there expecting you."

Reconnoitering a stream before crossing it, and having security out while crossing it is important. A pair of scouts should move upstream and down, looking for a suitable fording place and watching for signs of the enemy. Once a good place is found, one scout crosses the stream first, while the rest of the patrol remains concealed, ready to protect him by fire. The scout reconnoiters the other side, and if it is clear, signals back to the patrol. Patrol members then cross the stream one at a time. Flank and rear security is alert throughout.

Lakes.

"If you have to pass by lakes, keep at some distance from the edge of the water, lest, in case of an ambuscade, or an attack from the enemy when in that situation, your retreat should be cut off."

The principle here involves keeping away from traveled routes and likely points of ambush and enemy attack. Experienced patrols will always keep away from lakes edges, as they will from edges of woods. By keeping away from lakes, chances of being cut off are minimized. By avoiding the edges of woods in the daytime, patrols avoid being seen.

Ambush.

"If the enemy pursue your rear, take a circle till you come to your tracks, and there form an ambush to receive them, and give them the first fire."

Give the enemy a taste of his own medicine. If a patrol suspects it is being trailed, it can make a feint, and attempt to circle around and ambush the enemy itself or it can have part of its members lay in wait for pursuing the enemy.

Pursuit.

"When you pursue any party that has been near our forts or encampments, follow not directly in their tracks, lest you should be discovered by their rear-guards, who, at such a time, would be most alert; but endeavor, by a different route, to head and meet them in some narrow pass, or lay in ambush to receive them when and where they least expect it."

Don't follow the enemy blindly, give him credit for being as smooth as you are. Lay an ambush in a place where he is canalized or pick a place where the element of surprise will be used to its fullest extent.

Judgment and Initiative.

"Such in general are the rules to be observed in the ranging service; there are, however, a thousand occurrences, and circumstances which may happen, that will make it necessary, in some measure to depart from them, and to put other arts and strategems in practice; in which cases every man's reason and judgment must be his guide, according to the particular situation and nature of things; and that he may do this to advantage, he should keep in mind a maxim never to be departed from by a commander, viz: to reserve a firmness and presence of mind on every occasion."

In patrolling nothing is stereotyped. Terrain, enemy and local conditions will always effect the situation. On occasion cardinal principles of patrolling will have to be violated to fulfill the mission. The judgment of the leader and his initiative must be relied upon in these instances. In the last analysis the use of experience, common sense and initiative on the part of the scout or patrol leader will decide the success or failure of the mission.

Conversion of Information to Intelligence*

by Commandant McGeevor, 1st Brigade

THE object of the conversion of information to intelligence is to determine the probable accuracy, significance, and value of information received, so as to provide the commander with a clear cut picture of the enemy situation at any given time.

In order to prepare plans to deal with an enemy, the commander, irrespective of the strength of his command, needs to know the situation regarding his own forces, what he has at his disposal in men and matériel, where disposed, etc. To prepare these plans and to employ his command effectively, he also must know as much as possible about his opponent, the enemy. The more a commander knows about his enemy, the better prepared he will be to deal with him. To know where the enemy is located, the strength, armament, and composition of his force are all very important factors, but to get an idea also of the enemy's plans and capabilities is even more important.

Knowledge of the enemy's plans is not easily procured by combat intelligence. Nevertheless, sooner or later, as a result of movement, disposition, and other indications, the enemy will unmask his intentions. This is really where the most difficult part of the conversion of information to intelligence begins and ends.

It will be understood that in order to convert information properly, the individual responsible for the task must be not only in possession of all available enemy information in front of a particular sub-unit, sector or zone of action, but in front of neighboring sub-units or units. Sub-units, accordingly, not organized with an intelligence staff are not expected to attempt complete evaluation. This is where, during recent maneuvers, some sub-units were inclined to jump to wrong conclusions by evaluating or attempting to evaluate only that part of the enemy information that directly affected their own units, and consequently got a wrong picture of the enemy situation.

The following brief example should illustrate what is meant by the conversion of information to intelligence:

Enemy troops with an estimated strength of one company are located at "X." Another enemy force estimated as a company is at "Y." Another force estimated as at least a company is at "Z." An O. P. reports the movement of D. R.'s between the forces at "X," "Y" and "Z"; the D.R. at "X" goes backward and forward to "Z"; the D.R. at "Y," back and forward to "Z." Even with only this information, it can reasonably be taken that "Z" is a battalion headquarters and that "X" and "Y" are companies of that battalion, and that a reserve is held convenient to battalion headquarters at "Z."

That is Military Intelligence and, accordingly, is much more useful as such than the knowledge that isolated enemy groups were located at "X," "Y" and "Z." With the capture of prisoners or by some other means, it may be established that the enemy battalion is the Nth Battalion. With some further information, it may be possible to state that this enemy battalion's objective is the capture of such and such a place or the defense of such and such a sector.

Methods Employed

All information received is subject to a critical examination by the I.O. Such information must be examined in conjunction with the related items at hand. This is important for the reason already mentioned that if each item is examined separately without any relation to other items, the result will always be a wrong picture of the enemy situation.

The comparison of each item of information to a part of a jig-saw puzzle is a very appropriate analogy. Each item is only part of a whole—each item of information, like the parts of a jig-saw puzzle, having some relation to some other item.

To facilitate intelligence personnel in the solving of this puzzle, combat units should *ensure that wrong or misleading information is not presented*. Such wrong or misleading items of information are bound to do harm. It should be understood that very often intelligence personnel have no independent means of verifying the accuracy of information received from combat units. So long as combat units are allowed to send in wrong or misleading information the I.O. will have endless difficulty in forming a clear-cut picture of the enemy situation, and consequently commanders will be at a serious disadvantage in preparing plans to cope with the enemy opposing them.

Stale information is also misleading. Information, of course, should hardly ever be allowed to get stale. This would not happen if a "tag" were kept on the enemy observed. The longer you are acquainted with a person the better you will know that person. The same is true of the enemy—the longer you keep him under observation, the more you will know about him. You cannot know too much about the enemy. It should be appre-

*An Cosantoir.

ciated, of course, that first impressions sometimes are unreliable.

Exaggerated reports from combat units are common faults that should be guarded against. Combat units are always inclined to overestimate the enemy strength. The eradication of this fault should be effected by more practical training in the units, and by giving all ranks a good general idea of the value and functions of combat intelligence. Until this is done, satisfactory intelligence work by brigade and battalion I.O.'s will be very difficult.

The good I.O., like the good detective, is ever suspicious of everything in the field. At the same time, while always eager to hear something about the enemy, he should not be prepared to take everything he hears as gospel truth. This should be the case with all officers. Much damage can be caused by an over-credulous officer broadcasting unreliable information. Unfortunately, over-credulous people are also inclined to supply their own verification, with the result that it is very difficult at times to disprove doubtful information before the harm is done.

It is the duty of all ranks to collect and transmit all classes of enemy information. It is also their duty to help in the conversion of information to intelligence by ensuring that only accurate information is transmitted. It is the responsibility of officers to ensure that all information collected by their subordinates is properly verified, if at all practicable, before its submission to their respective C.P.'s—and this, without having to be instructed to do so by higher authority.

Deductions

In converting information to intelligence, one must concentrate on everything that helps to give a mental picture of the enemy situation. This can be done only if one has kept an open mind throughout the process of evaluation. Only acts that have been verified and evaluated should be considered. Unwarranted conclusions are dangerous and must be avoided. The mind should also be kept free from unnecessary detail, and the approach to the solving of the "puzzle" should be on a broad basis already prepared by the building up of small detailed but reliable reports.

Concentrate for example, on the enemy strength, weakness, reserves, protective elements, flanks, artillery, etc.

Enemy strength, which is always located much the same with relation to other elements of enemy force, is the most dangerous factor and consequently should receive more attention.

While *enemy weakness* is not so dangerous as his strength, it is nevertheless important and should be located.

Enemy protective elements generally fan out from the center of a main effort in attack, and from the center of resistance in defense, and decrease in strength as they deploy outwards.

Enemy reserves are usually concentrated in the most suitable location from which to support the main effort.

Don't concentrate on scouts here, scouts there, scouts everywhere; concentrate instead on what is behind the scouts, his protective elements, strength, and reserves.

Distribution

To all whom it may concern—to higher formations, subordinate units, neighboring units, sub-units, or individuals—information *must be prompt to be of value,* and is useless unless it reaches the individuals or units concerned in time to serve their purpose. Accordingly, it is very important that all items of information are transmitted promptly from the combat units in touch with the enemy.

Classification for Distribution

There are two classes of information for distribution —first, that which should be placed immediately in the hands of the commander and staff and higher, lower, and adjacent units; second, that which can be held for inclusion in the unit periodic report. It is impossible to state definitely what intelligence belongs to each category. The best guide is the I.O.'s knowledge of the situation in other units and their requirements. If in doubt as to what action to take distribute immediately. In the periodic summary or report, it is desirable to include intelligence of the first class already reported. This is to avoid having a wrong picture painted through the omission of some information of importance, which at the time may be overlooked by the recipient of the information.

Methods of Distribution

1. Personal conference.
2. Map.
3. Memoranda.

Intelligence requiring immediate distribution is usually distributed by telephone, telegram, radio messages, map overlay, or personal visit.

Personal conference is the most effective for staff, as it allows for exchange of intelligence between different sections of a headquarters.

In addition, it will be necessary to adopt any of the following methods:

1. Summary.
2. Intelligence report.
3. Intelligence estimate.

The summary is the most important from the point of view of the squadron, battalion, and brigade. To be effective this summary must avoid unnecessary detail and yet give as clear a picture as possible of the enemy situation. Unlike the estimate, because of lack of information, it may not always be possible to give in it definite conclusions. The fact that this cannot be given, however, need not prevent the submission of the summary.

Good summaries are very helpful in orienting others quickly on the uptodate enemy situation. This can be appreciated when it is realized how various items of enemy information arrive at C.P. A mass of disconnected items arrive, and if one cannot arrange these in an orderly manner for presentation to others, very often the "wood cannot be seen for the trees." A mass of items of detail completely cloud one's brain, and with this cluttering up, the major points cannot be grasped properly. Attention to detail itself is important and must not be overlooked, but it must be treated as detail and not allowed to influence unduly one's opinion on isolated instances, nor kept so much in the foreground that it prevents one from forming a good general picture of the situation as a whole.

Conclusion

To overcome the enemy in battle, the commander must have as good a knowledge as possible of the enemy situation. In order to ensure this, he must be presented with a sound estimate, which can be done only if the person preparing the estimate, in turn, has been presented with all available enemy information. This is possible only if combat units in contact with the enemy submit prompt and accurate information.

Unfortunately, heretofore, we have been inclined to take it for granted that this information was always forthcoming without any effort on our part. We got it in general and special situations—"on a plate" so to speak. On maneuvers, we seldom got or expected to get more than that the enemy was approaching, or located in a certain field.

Nowadays, we can never expect to find our enemy accommodated in one or two fields. We must expect him over the whole countryside. An enemy now moves faster and oftener; he seldom sits for long anywhere unless he is forcibly prevented from moving. The ordinary rank and file must be trained in the collecting and passing on of accurate enemy information. It must be organized within the section, platoon, troop, company, squadron and battalion—all along the chain of command. It must be considered as an important military function and not as a semi-police activity. Military intelligence must be encouraged and bolstered up everywhere in the army.

Surprise is worth a great deal, especially to weak forces. It was achieved before in this country through *good intelligence* by *comparatively weak forces*, not so well armed or trained as we are. It can be achieved again with little effort on our part. The will to do, and some practical training, is all that is required. This training is simple, but nevertheless important and necessary. Even messages containing enemy information require practice and thought for their construction and writing.

Think harder and oftener. As one can see without observing, he can also think without doing any worthwhile thinking. That is thinking without reasoning.

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Book Reviews

THE SECRET HISTORY OF THE WAR. By Waverley Root. 2 volumes. Charles Scribner's Sons. $10.00 set.

This book is the result of the careful compilation of all available information on the propaganda and political aspects of this war. Faithfully adherent to the canons of his profession, the author's statements are clear and unequivocal, his facts substantiated, his opinions stated as such with proper qualifications, and his deductions pursued with a thoroughness that would be an affront to the reader were it not essential to the peace of the world that these deductions be acknowledged in the light of cold reasoning.

In the first volume the various countries of Europe invaded by Germany are studied as separate entities in order of their conquest. The preinvasion propaganda is fully described, the method of the military conquest is reviewed for its political influence rather than its tactical importance, and the "New Order" is presented as completely as present information permits.

While the author makes no effort to pose as a tactical critic or amateur military strategist, he has inevitably included much of the military picture. Among the items of especial interest is the résumé by a high German staff officer after he had studied the first reports from the Russian front.

"1. We gravely underestimated the technical and scientific capacity of the Russian High Command.

"2. We underestimated the combative qualities of the Russian soldier.

"3. We underestimated the qualities of the Russian officers and noncommissioned officers.

"4. We underestimated the value of Russian equipment, particularly as regards planes and tanks." (This was in 1941.)

"5. We underestimated to an incomprehensible extent the will to resist of the Russian people, on the basis of the theory that Communist ideology had failed to take root in the country. . . ."

Mr. Root also confirms the well-known Russian use of cavalry in this war, and states that in preparation for offensive action in the Ukraine the reserves consisted of 120 divisions, 72 infantry, 24 motorized and 24 cavalry. An interesting ratio.

Under "Peace Offensives" Mr. Root reviews the most discussed mystery of this war, the ever intriguing story of Hess, with some new twists and a more logical explanation than is generally offered for the unceremonious arrival of this friend of the Fuehrer's. An unfortunate editorial slip in this passage is the author's confusion of the so-called "Oxford" Group, started by Frank Buckman, and the Oxford Movement. This should be corrected in future editions.

In the second volume the author deals with Germany's "New Order" in general, the internal fronts, the influence of the neutral nations, the war in Asia, and the political and military aspects of the American foreign policy and the North African Invasion. It is to be lamented that the latter portion, comprising some 500 pages of the second volume, is not printed in a separate book. It will be most unfortunate if the important facts coördinated here are overlooked by having been included in so vast a work.

The weaknesses apparent in this history have been analyzed by the author with considerable accuracy. He writes, "It is uneven in quality. . . . Its various sections are not always developed in true proportion. . . . It started out to be anecdotal, and developed, as it matured, more serious purposes."

It will be some time before an adequate military history of the tactics and strategy of this war can be written, but it is not too early to begin to review the important political and propaganda developments and their effects on the European countries. Mr. Root's book is a mine of information which will serve as a reference for years to come. It is to be hoped that those who read it will "mark, learn, and inwardly digest" the material contained therein.

MILITARY INSTITUTIONS OF THE ROMANS. By Flavius Vegetius Renatus. Military Service. $1.00.

Around 1000 A.D. Vegetius was the favorite author of Foulques the Black, able and ferocious Count of Anjou. From that time until the 19th Century his *De Re Militari* remained one of the most influential military treatise in the western world. It was translated into English before the invention of printing, and was first published by Caxton in 1489.

Military Service Publishing Company has selected the translation made by Lt. John Clarke, published in 1767, as the best version of this work to be added to their Military Classics. The text has been edited only to the extent necessary to conform to modern usage. Subheadings have been inserted to add readibility and diagrams and sketches help to clarify the material.

THE STORY OF A SECRET STATE. By Jan Karski. Houghton Mifflin Co. $3.00.

Democracy was reborn in the underground of Poland, as it has been in all of the conquered countries of Europe. Jan Karski tells the story of this rebirth through his own experiences with the four separate political parties that coöperated with the underground movement.

As a Polish officer Jan Karski suffered capture and imprisonment by the Russians. Disguised as a peasant he was exchanged in a group of prisoners being sent to Germany. He was initiated into the underground, served as a liaison between different groups in Poland, between the Army and the state, and the government in Poland and the outside world. During his activities he was captured and tortured by the Gestapo, from whom he was rescued by men who were instructed to rescue him if possible, to kill him if they were not successful.

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Much of interest is brought out in this personal history —the caliber of people comprising the underground, the advanced political planning mapped out by the leaders, not only for the war, but in the postwar period as well, the amalgamation of otherwise alien groups to fight the one great enemy. All of these factors are important to a comprehensive picture of what has been happening in the years of Europe's second dark age, and what is likely to arise out of this darkness.

✦ ✦ ✦

WHERE AWAY. By George Sessions Perry and Isabel Leighton. Whittlesey House. $2.75.

The story of the USS *Marblehead* from December 7, 1941, to the day that she wearily dropped anchor in New York harbor, is a saga worthy of the U. S. Navy. George Perry and Isabel Leighton have written a splendid account of the ship and her crew, during bitter and trying weeks of battle and salvage. They have succeeded in avoiding sentiment without being callous. In fact, their book has so well paid a tribute to the men of the *Marblehead* that it seems only just to remind readers that there were other ships and other crews as dogged and as valiant, lacking only a Boswell.

✦ ✦ ✦

MILITARY JUSTICE FOR THE FIELD SOLDIER. By Lt. Col. Frederick Bernays Wiener. Infantry Journal. $1.00.

This is the second and revised edition of Colonel Wiener's book of advice on the legal aspects of military discipline. Written in simple, nonlegal terminology, it is intended as an adjunct to, not a substitute for, the *Manual For Courts-Martial.*

✦ ✦ ✦

BELLE BOYD. By Louis A. Sigaud. Dietz Press. $3.00.

The author's own history adds materially to the interest of this biography of the famous Confederate woman spy. Colonel Sigaud was decorated by both the United States and the French governments for his services as intelligence officer in World War I. Since the war he has contributed several articles to magazines and published *Douhet and Aerial Warfare.* His familiarity with Fräulein Doktor, Mata Hari and other women involved in espionage led him to seek documentary proof of the true story of the legendary Belle Boyd.

Women of the 1850's were not supposed to undertake the dangerous and daring work of spying on military enemies, certainly not at 17. Many comments from diaries and books published by her contemporaries indicate that this Virginia girl received the usual treatment accorded women who dared to defy the accepted traditions of the day. Her later career was certainly not made easier by the jealousy of compatriots and the hatred of the enemies she so skilfully fleeced of information.

Colonel Sigaud has done a great deal of research to secure adequate support for his statements in refute of previous publications. The product of his work is of considerable interest and will be read with delight not only by those who have been raised to look on Belle Boyd as a romantic figure of her time, but by those interested in espionage in the Confederate Army as well.

FIGHTING GENERALS. By Lt. General Robert Lee Bullard. J. W. Edwards. $5.00.

General Bullard, author of *Personalities and Reminiscences of the War* and *American Soldiers Also Fought*, commanded the famed 1st Division during the summer of 1918 and later the American Second Army. The 7 generals, Joseph T. Dickman, Hanson E. Ely, Henry T. Allen, Ulyses G. McAlexander, Preston Brown, William G. Haan, and John F. O'Ryan, whose stories he relates, served either under or with the author in World War I.

The simple, direct biographical sketches, in spite of their brevity, give remarkably clear pictures of the personalities described. Excellent photographs and a few very good sketches enhance the attractiveness of an exceptionally fine format.

* * *

THE BOLINVARS. By Marguerite F. Bayliss. Henry Holt and Company. $3.00.

Originally printed in a limited quantity by Derrydale Press at $15.00 the copy, this exciting mystery novel, steeped in the hunting and racing traditions of a gay era on two continents, sold out completely. It has become such a collectors' item, and literary legend, that it warranted reprinting in a more popular edition.

The author exhibits a thorough knowledge of horsemanship and a keen sympathy and understanding of the historical background of the 19th Century.

The mystery of an involved family entanglement is somewhat overshadowed by the hunting field and does not command the intense interest that it might have created in more subdued company. However, the novel is well written, and its sustained action certainly does not permit the reader's attention to lag.

Author's Choices

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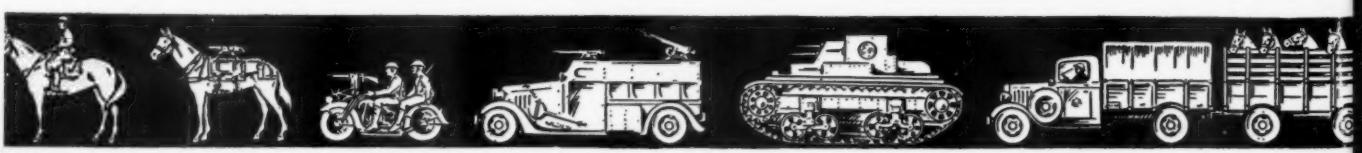
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